

**DEPARTMENT OF DEFENSE AUTHORIZATION FOR
APPROPRIATIONS FOR FISCAL YEAR 2004**

HEARING
BEFORE THE
COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE
ONE HUNDRED EIGHTH CONGRESS
FIRST SESSION
ON
S. 1050

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 2004 FOR MILITARY ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CONSTRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF ENERGY, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 2
SEAPOWER

APRIL 1, 2003



Printed for the use of the Committee on Armed Services

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 2004—Part 2 SEAPOWER

**DEPARTMENT OF DEFENSE AUTHORIZATION FOR
APPROPRIATIONS FOR FISCAL YEAR 2004**

HEARING
BEFORE THE
COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE
ONE HUNDRED EIGHTH CONGRESS
FIRST SESSION
ON
S. 1050

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 2004 FOR MILITARY ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CONSTRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF ENERGY, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 2
SEAPOWER

APRIL 1, 2003



Printed for the use of the Committee on Armed Services

U.S. GOVERNMENT PRINTING OFFICE

87-324 PDF

WASHINGTON : 2004

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2250 Mail: Stop SSOP, Washington, DC 20402-0001

COMMITTEE ON ARMED SERVICES

JOHN WARNER, Virginia, *Chairman*

JOHN McCAIN, Arizona	CARL LEVIN, Michigan
JAMES M. INHOFE, Oklahoma	EDWARD M. KENNEDY, Massachusetts
PAT ROBERTS, Kansas	ROBERT C. BYRD, West Virginia
WAYNE ALLARD, Colorado	JOSEPH I. LIEBERMAN, Connecticut
JEFF SESSIONS, Alabama	JACK REED, Rhode Island
SUSAN M. COLLINS, Maine	DANIEL K. AKAKA, Hawaii
JOHN ENSIGN, Nevada	BILL NELSON, Florida
JAMES M. TALENT, Missouri	E. BENJAMIN NELSON, Nebraska
SAXBY CHAMBLISS, Georgia	MARK DAYTON, Minnesota
LINDSEY O. GRAHAM, South Carolina	EVAN BAYH, Indiana
ELIZABETH DOLE, North Carolina	HILLARY RODHAM CLINTON, New York
JOHN CORNYN, Texas	MARK PRYOR, Arkansas

JUDITH A. ANSLEY, *Staff Director*
RICHARD D. DEBOBES, *Democratic Staff Director*

SUBCOMMITTEE ON SEAPOWER

JAMES M. TALENT, Missouri, *Chairman*

JOHN McCAIN, Arizona	EDWARD M. KENNEDY, Massachusetts
SUSAN M. COLLINS, Maine	JOSEPH I. LIEBERMAN, Connecticut
LINDSEY O. GRAHAM, South Carolina	JACK REED, Rhode Island

(II)

CONTENTS

CHRONOLOGICAL LIST OF WITNESSES

NAVY AND MARINE CORPS DEVELOPMENT PRIORITIES, PROCUREMENT PRIORITIES, AND NAVY SHIPBUILDING PROGRAMS

APRIL 1, 2003

	Page
Clark, Adm. Vernon E., USN, Chief of Naval Operations	7
Hagee, Gen. Michael W., USMC, Commandant, United States Marine Corps ..	18
Young, Hon. John J., Jr., Assistant Secretary of the Navy for Research, Development, and Acquisition	46
Mullen, Vice Adm. Michael G., USN, Deputy Chief of Naval Operations for Resources, Requirements, and Assessments	59

(III)

**DEPARTMENT OF DEFENSE AUTHORIZATION
FOR APPROPRIATIONS FOR FISCAL YEAR
2004**

TUESDAY, APRIL 1, 2003

U.S. SENATE,
SUBCOMMITTEE ON SEAPOWER,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

**NAVY AND MARINE CORPS DEVELOPMENT PRIORITIES,
PROCUREMENT PRIORITIES, AND NAVY SHIPBUILD-
ING PROGRAMS**

The subcommittee met, pursuant to notice, at 2:33 p.m. in room SR-232, Russell Senate Office Building, Senator James M. Talent (chairman of the subcommittee) presiding.

Committee members present: Senators Talent, Warner, Collins, Kennedy, and Reed.

Majority staff member present: Thomas L. MacKenzie, professional staff member.

Minority staff members present: Daniel J. Cox, Jr., professional staff member; Creighton Greene, professional staff member; and Maren R. Leed, professional staff member.

Staff assistants present: Michael N. Berger and Andrew Kent.

Committee members' assistants present: James P. Dohoney, Jr., assistant to Senator Collins; Lindsey R. Neas, assistant to Senator Talent; and Mieke Y. Eoyang, assistant to Senator Kennedy.

**OPENING STATEMENT OF SENATOR JAMES M. TALENT,
CHAIRMAN**

Senator TALENT. We will convene the hearing. I want to welcome our distinguished witnesses this afternoon as the Seapower Subcommittee meets to consider how the fiscal year 2004 budget request and the future years defense program (FYDP) supports Navy and Marine Corps development and procurement priorities in our first panel, with the second panel focusing on current and developmental Navy shipbuilding programs.

I would be remiss, however, if I did not first state my support for and gratitude to our men and women in uniform, many of whom are in harm's way as they participate in Operation Iraqi Freedom, Operation Enduring Freedom, the global war on terrorism, and in other outposts throughout the world. Their dedication and courage are an inspiration to us all and our thoughts and prayers are with them and with their families. I especially want to ex-

press our sympathy and support for the families of those who have lost their lives or been wounded in the defense of this great Nation.

I also want to thank Senator Kennedy, whose leadership on this subcommittee has for many years ensured that our Navy and Marine Corps team has become the most capable and ready maritime expeditionary team in the world. I look forward to serving with him in the same bipartisan fashion that this subcommittee has been known to practice in the past.

For our first panel today, we are pleased to have Admiral Vernon Clark, the Chief of Naval Operations (CNO), and General Michael Hagee, the Commandant of the Marine Corps. Our sailors and marines whose training and equipment you are responsible for are performing superbly. It is clear that investments in force readiness over the last several years have paid off. The purpose of this panel, though, is to focus on those things that will enable sailors and marines in the decades ahead to accomplish their missions equally as well.

The Department's quadrennial defense review (QDR) issued in fiscal year 2001 established certain force structures as, "the baseline from which the Department will develop a transformed force for the future." The capabilities possessed by this force structure were assessed to present moderate operational risk, which could be raised to high risk under certain combinations of warfighting and smaller scale contingency scenarios.

For the Navy, force structure is 12 aircraft carriers, 12 amphibious ready groups, 55 attack submarines, and 116 surface combatants. For the Marine Corps, this force structure is four divisions, four air wings, and four service support groups, with three active and one Reserve in each case.

It should be noted that the force structure supported by the fiscal year 2004 budget and the future years defense program does, in fact, go below these QDR numbers in certain categories. This follows a number of years during the decade of the nineties when critical requirements of the QDR were underfunded.

At the same time, the operational tempo of our force is extremely high, and world events may require continuing high operational tempo in the years ahead. I believe it is critical that our shipbuilding rates are increased in light of this reality.

The fiscal year 2004 budget request includes funding for seven new ships. This is an important first step, with two more ships than were projected last year, but I want to emphasize that it is only a first step. The ships that are authorized and appropriated for fiscal year 2004 will not be delivered for quite a few years. Yet in the near future the Navy is accelerating the retirement of older ships, with the fleet scheduled to reach a level of only 291 ships in fiscal year 2006.

I am aware of the increased capabilities of the ships now being developed and built, but I am concerned about the level of risk being assumed by decommissioning ships earlier than originally planned.

CNO, your Seapower 21 vision conveys the vision of a Navy that will be sea-based, deployed worldwide, operating near foreign shores, projecting defense for the United States and allied forces, and prepared to strike and remain engaged throughout a conflict.

This vision is based on the pillars of Sea Strike, Sea Shield, and Sea Basing. General Hagee, it is this sea-basing concept that appears to be the linchpin for the Marines' expeditionary maneuver warfare concept of operations.

You are both to be congratulated on recent examples of how your Services are complementing one another to gain efficiency. An example of this is the tactical air integration initiative. It is important to gain efficiencies wherever possible to maximize the buying power of each taxpayer dollar. It is critical, though, to ensure the required increases in readiness which are necessary if this initiative is to succeed are fully funded.

Again, Admiral Clark and General Hagee, thank you for taking time from your busy schedule to be with us this afternoon. I look forward to your testimony. At this point I was planning to defer to Senator Kennedy for his opening statement, as well as Senator Warner, chairman of our committee.

Senator WARNER. Let me state for the record that Senator Kennedy is the longest-serving member on the committee now on this subcommittee. He has broke my record because I have had two terms as chairman and had to pull back from this subcommittee. So I shall make a statement after he is finished his opening.

Senator TALENT. I recognize the distinguished Senator from Massachusetts.

STATEMENT OF SENATOR EDWARD M. KENNEDY

Senator KENNEDY. Thank you very much. I look back over that history. I will never forget, as a young member of this committee and with my distinguished colleague there, where we went into an important negotiation between Massachusetts and the State of Virginia, and out of that negotiation came an aircraft carrier for John Warner and I got a band up at Fort Evans, just about a year before it was closed. So I always keep an eye on that smooth-talking Virginia gentleman who is our chairman.

Senator TALENT. Senator, when Massachusetts and Virginia get together, there is nothing for the rest of us.

Senator KENNEDY. That is right.

I want to thank Senator Talent. As he mentioned, we have had a good opportunity over a period of years of working very closely together in this area in terms of force projection and responsibilities in the building of ships in the Navy and the Marine Corps. We have worked very closely with the full committee, both Republican and Democrat alike. I welcome our new chairman in this. I understand from talking to a number of our colleagues he has been out working hard in preparation for this responsibility and I am looking forward to working very closely with him.

Senator TALENT. Thank you.

Senator KENNEDY. As always, it is good to be with an old friend who is a tireless chairperson and who has had an extraordinary public career. But I do not think there is anyone that has been more committed to the Armed Forces of our country and the security of our Nation than John Warner. So it is good to have him here again with us on this committee.

Senator WARNER. I thank my colleague very much. This is against the background, when I was Secretary, I closed the Boston Naval Shipyard.

Senator KENNEDY. That was nice, too. [Laughter.]

Wondering why I am still around, as I listen.

So in any event, but in a serious way, we want a hearing that has the spokespersons for the Navy and the Marine Corps here to again express our enormous appreciation and incredible thanks to all of those that are under your command and doing so much for the interests of our Nation. We may have had some differences in the Senate in terms of how we get to where we are, but there is absolutely no reservation or hesitancy whatsoever in giving all and full and complete support and appreciation for the extraordinary efforts that are continuously being made and the extraordinary versatility and pressure they are under, as well as the courage, bravery, and the challenges. Whether it is sandstorms or the heat today that is affecting them, we are enormously grateful.

I want to say that we are enormously concerned on this subcommittee in working with the Department of the Navy to address some of the very important issues like improvement of fire support capability. We will come back to that issue in terms of the building and the construction of ships, including the organic Marine Corps fire support and Navy shore fire support. This has been an ongoing and continuing issue. As for the augmenting of our mine countermeasures capability, both for sea and on land, we know that there has been some progress made, but there have been some recent decisions I would like to get some explanation on.

I want to note for the record that this subcommittee has taken the lead on ensuring many of the existing capabilities. The hearing will focus on the vision of the Navy and the operational concepts for the future and how the budget before Congress supports that vision. I continue to believe the fundamental problem we must deal with is achieving the proper level of modernization to support tomorrow's readiness and with the sufficient modernization aimed at the proper objectives. We could be faced with the situation of having forces without necessary capabilities or we could be in a position of trying to support theater combatant commanders' requirements with forces that are too small to meet their requirements.

We all know that our men and women in the Armed Forces will respond admirably in any crisis, just as they have been doing in support of the operation in Afghanistan and now Iraq. However, over the long term, we cannot count on them making up for the inadequate shipbuilding investments by asking crews to stay out longer, much longer deployments, and less time at home with families. This obviously is related to the decisions that are going to be made in terms of the reductions in the ships, the guided missile destroyers (DDGs) now, with the idea of building shipbuilding in the future and the kinds of pressures that that is going to be putting on the crews.

Everyone can agree that we will continue to need strong Navy Forces to protect our interests in many sea areas overseas and within that context there are a number of investment issues we need to consider today.

So I thank the chairman for calling this hearing and look forward to the testimony.

Senator TALENT. I thank the Senator.

Mr. Chairman.

Senator WARNER. Thank you, Mr. Chairman. You have no idea of the importance and the pleasure that you will gain from service on this committee, and to start out as chairman in your first year in the Senate is a very special, noteworthy accomplishment.

Senator TALENT. It is a humbling honor and I am grateful for it.

Senator WARNER. I say to my dear friend of so many years, Senator Kennedy, I know well your love for the Navy, the love for the sea, that of your family, and the long and distinguished association with the United States Navy.

I join the chairman and Senator Kennedy in expressing our profound gratitude to the men and women of the Armed Forces, particularly those under your respective commands, and how magnificently they are performing today. With a sense of humility, this subcommittee looks back on its work in providing the weapons, the ships, the aircraft, with which they are now in the most professional and courageous manner discharging their duties on behalf of the cause of freedom.

But this subcommittee is very proud of our record of a quarter of a century that I have been on. We have steadfastly stood with the need to modernize the Services. We are very proud, certainly, Admiral Clark, of your personal guidance on this shipbuilding account.

I recall several years ago when we did not have the funds and you had to make the tough decision to take the equipment that you had, whether it is on land, sea, or in the air, and put it in first class shape before new acquisitions. That was a decision that was received with mixed emotions within the uniformed ranks and here in Congress. But you were steadfast, and now this year there is a very clear and decisive upturn in the procurement accounts for shipbuilding. I think you can take a lot of personal credit, which is not your style, but you are deserving of a lot of personal credit.

General Hagee, you follow one of the most distinguished men ever to serve as Commandant of the Marine Corps and you will indeed add your chapter to the Corps in maintaining it ready, well-equipped, and modernized. But throughout history, the Corps has always done its very best with perhaps less than the best. Perhaps under your watch you can turn that around and get just as good equipment as the others.

I must say, General Hagee, I have just been handed a note, a second marine has lost his life from the State of Virginia, and you and I have a very special feeling about that.

Admiral, I want to say about the CVN-21 that you fought steadfastly. You have full funding now for scheduled outyears 2007 and 2008. That, like the predecessor carriers, will be constructed at Newport News Shipbuilding, a yard with which I have had 33 years of association. I first came to know that yard under President at that time Freeman, when I was Under Secretary of the Navy beginning in 1969. I think it has turned out extraordinarily high quality products through the years and will continue to do so under the current administration.

I have not had the opportunity to talk to a certain individual in the Department of Defense who has expressed some concerns about the relationship between the Newport News Yard and the Department of the Navy, but I intend to do so. But in the mean time, I hope you in your remarks can address the issue as to whether or not you find any improprieties along those lines, because it is important that Congress in its oversight capacity address those situations.

Having said that, I thank you, Mr. Chairman, and the ranking member and other members, for indulging my few minutes here with this distinguished subcommittee.

Senator TALENT. We are grateful to you for coming by, Mr. Chairman. Thank you for those comments.

Senator Reed, do you have an opening statement?

Senator REED. Mr. Chairman, just to thank you for convening this hearing. I wish you well as you take on this important responsibility. I have a great deal of respect and regard for both Admiral Clark and General Hagee and I await their testimony eagerly. Thank you and the forces they lead.

Senator TALENT. Thank you, Senator.

Senator Collins.

Senator COLLINS. Thank you, Mr. Chairman.

First of all, I want to congratulate you on your chairmanship and admit for the record that I am insanely jealous they picked you rather than I as the chair of the Seapower Subcommittee. But I look forward to working very closely with you to ensure that our Navy has the resources it needs.

I have enjoyed working with both Admiral Clark and General Hagee. I very much appreciate the commitment to much needed shipbuilding that is in this budget. General, I want to tell you that on Saturday I attended a memorial mass for two marines from Maine who lost their lives in the helicopter crash the very first days of this conflict. The presence of the marines who attended this mass meant so much to the family. When the marine presented the folded flag to the mother of the helicopter Captain Aubin who was killed, there was just not a dry eye in the entire church. It was extremely moving. I know that the participation of the marines meant a great deal to the family. So I just wanted to pass that on to you.

Our thoughts are all with the troops in the Persian Gulf and we support you wholeheartedly. Thank you.

[The prepared statement of Senator Collins follows:]

PREPARED STATEMENT BY SENATOR SUSAN M. COLLINS

Thank you Mr. Chairman. As we begin today's hearing, it is appropriate for us to take a moment to recognize the courage and sacrifice of our forces currently engaged in combat in Iraq. In doing so, I also believe that it is important for us to remember that the work of this subcommittee is critically important in ensuring that our Armed Forces have the resources they need to fight and win our Nation's wars. The investments we make today in shipbuilding serve to shape the size and capabilities of our fleet for decades to come. That is why I have been so troubled in recent years by the dangerously low ship construction budgets that have been submitted.

The fiscal year 2004 budget submission, however, turns the corner on shipbuilding. I would like to express my appreciation to all of our witnesses today for their hard work in producing this budget. It includes over \$12 billion for seven ships, including three DDG-51 destroyers, a *Virginia*-class submarine, an LPD-17, and

three dry cargo ships. The fiscal year 2004 budget submission also includes substantial investments in the next generation of vessels. It includes over \$1 billion in research and development funding for the DD(X) destroyer, and \$158 million for the Littoral Combat Ship. These funds, combined with the continuing development of the CVN-21 aircraft carrier, will help to transform the Navy to deal with threats as they emerge in the coming decades.

Again, I applaud the Navy for including much needed increases in the shipbuilding account. However, we must now deal with the legacy left behind by years of inadequate funding for ship construction. Even with 7 new ships budgeted for fiscal year 2004, our fleet will still dip below 300 ships. I have asked our first witness, Admiral Clark, on a number of occasions for his views on the proper size of our fleet. As recently as February 25 of this year, Admiral Clark has expressed his belief that a fleet of 375 ships would adequately meet our national security requirements. Clearly, we have a great deal of work to do to meet that goal.

In the coming years, we also face a significant challenge in the transition from existing ship programs to the full scale production of next generation vessels. In particular, I have very serious concerns about the Navy's plan for the procurement of major surface combatants after fiscal year 2005. As it current stands, the Navy only plans to procure one DD(X) destroyer in fiscal year 2006, and one in fiscal year 2007. In fiscal year 2008, the Navy would procure two DD(X) destroyers. Thus, from fiscal year 2006 through fiscal year 2008, there will be only four major surface combatant ship constructions. As our witnesses are aware, this is wholly inadequate to sustain our Nation's ship construction industrial base.

I look forward to working with the witnesses on both of today's panels on these issues.

Senator TALENT. Thank you, Senator.

Senator WARNER. Would the chair yield to me just a moment to clarify something?

Senator TALENT. Sure.

Senator WARNER. For the record, this distinguished Senator from Maine would be in that chair had it not been that her peer group saw fit to have her be the chairman of a full Senate committee, the Government Affairs Committee. Under our rules, quite appropriately, we like to distribute the opportunities among members. But I did not want you to think that the chairman passed you over.

Senator COLLINS. Thank you, Mr. Chairman, for that clarification.

Senator TALENT. Mr. Chairman, that is yet another reason I am grateful for Senator Collins having received that honor. [Laughter.]

Senator KENNEDY. We have not accepted those rules. We still use old seniority, and I do not want Jack Reed and others to be hearing about this. [Laughter.]

Senator WARNER. Mr. Chairman, we have a meeting of the Intelligence Committee at this point in time, presided over by Senator Roberts, and my attendance is needed there. So I will not be present for the testimony.

Senator TALENT. Again, thank you, Mr. Chairman.

Senator WARNER. Thank you for this opportunity.

Senator TALENT. I want to welcome Admiral Clark and General Hagee. Admiral Clark, we do not need any long introductions. We are waiting to hear your statement and looking forward to it.

STATEMENT OF ADM. VERNON E. CLARK, USN, CHIEF OF NAVAL OPERATIONS

Admiral CLARK. Thank you very much, Chairman Talent, Chairman Warner, Senator Kennedy, and other distinguished members of the committee. It is a privilege to be here with you this afternoon and be able to represent the men and women serving in the Navy.

I also want to say that I am absolutely delighted to be able to appear along side the Commandant of the Marine Corps, my number one joint partner and the leader of a corps that is performing brilliantly in the theater of operations and the leader of an organization that is bringing the Navy-Marine Corps team closer together than we have ever been in our history.

There are those who have served in times past that absolutely do not even understand the nature of the relationship between the United States Marine Corps and the United States Navy. I want to say that I am absolutely honored to be able to serve along side an individual like General Mike Hagee.

Of course, we are here today to discuss the investment strategy for the future, for fiscal year 2004. Before I do that, I just want to bring you up to date, as I did in the full committee, and to tell you that today—this morning's number, Mr. Chairman—54 percent of our Navy is forward deployed on the point. Different mixes are deployed in different ways. Seventy percent of the amphibious structure is deployed taking General Hagee's marines to the point. Seven of my aircraft carriers are deployed. Seventy percent of my air wings are deployed. They are on the tip of the spear and they are carrying out the President's orders and direction.

Of course, most of those numbers are engaged in Operation Iraqi Freedom, striking the enemy, conducting close air support in support of land forces, clearing the sea lanes, bringing in supplies and logistics, and protecting our joint coalition forces on land and at sea.

On the day that we commenced hostilities, I sent a note to Secretary Rumsfeld and I told him that this Navy today is more ready than I have ever seen it in my career. I have never seen it this ready. As I indicated before, we have a major piece of our Navy forward, proving it every day.

I would say that the numbers that I cited for you, in my experience in previous times that I have served in the Navy our ability to surge this kind of force forward absolutely would not have been possible. Our readiness would not have been up to it.

I want to say that I appreciate Chairman Warner's comments about the investment that the leaders of America have made in our readiness. That is the way I phrased it. This body and the support of the Seapower Subcommittee made the investments possible so that we could be realizing the incredible readiness that we are experiencing right now. The result is that we are capable, we are on the point, and we have a lethal force and a decisive combat force.

So the challenge for us is, how do we keep it that way? How do we sustain the gains in current readiness while focusing on the future and transformation? I believe that is the whole focus of our time here together.

Last summer, Mr. Chairman, as you indicated, we laid out a vision for the future called Seapower 21. I will not go into the details this afternoon, but I have highlighted it in my written testimony. I will just say it is about projecting offense, Sea Strike; it is about projecting defense, Sea Shield; it is about operating from the Sea Base—the largest maneuver space on the face of the Earth. That is the world's oceans. It is about having the freedom of maneuver, the freedom of operations, from the maritime domain.

Let me just talk briefly about what we are doing in Sea Strike as we speak. The front end of Sea Strike is the United States Marine Corps and General Hagee will talk about the specifics of their contribution. But the leading edge of our ability to project offense starts with the partnership between the Navy and the Marines, and it could not be more visible than it is right now.

Of course, it is about long-range precision firepower. We started this conflict with 1,100 Tomahawk Land Attack Missiles (TLAMs) in theater, and of course many of those have been expended.

It is about long-range tactical air (TACAIR). It is about time-sensitive joint Air Force and Navy strikes on Iraqi leadership.

It is about Sea Shield. It is about projecting defense. Missile defense is not a figment of our imagination. The last year we have had an incredible series of successes, a great year in test and evaluation and research and development leading towards missile defense. I would tell you that one of our research and development (R&D) configured platforms has in fact been tracking the missiles and has made initial contact on some of the missiles that have been shot down by the Patriot missile batteries in theater as we speak.

So it is about output, the joint Army and Navy missile defense team. Of course it is about sea basing and exploiting that operational independence that I talked about. These are just examples.

This year's investment strategy is committed to building toward the vision of tomorrow. I just want to say very briefly a few of those platforms that are so important to us. Multi-mission destroyer (DD(X)) is the heart of our future and our family of ships that includes next-generation cruiser (CG(X)) and the Littoral Combatant Ship (LCS). It involves incredible technological advances and development. Admiral Clark's view is that it will frame the future of the Navy for the next 30 years. It will help determine what our ships are all about.

The LCS, I believe, is critical to Sea Shield, designed from the keel up to dominate the battle space in the near-land area—the littorals—built with plug and play technology in mind from the beginning, conceived with unmanned vehicles in mind on the surface, in the air, and under the surface.

CVN-21, the first new carrier design in 40 years. I am so pleased that this ship and this new development is funded in the fiscal year 2004 submit.

LPD-17, absolutely critical and integral to the Navy-Marine Corps partnership, and that supports new Marine capabilities like Advanced Amphibious Assault Vehicle (AAAV) and MV-22 and the improved Landing Craft Air Cushion (LCAC).

The Virginia-class submarine, the most advanced multi-mission submarine ever built anywhere in the world. I mentioned missile defense.

So the question is how do we get there? Well, we have to find the resources. So I will just say, as I did before the full committee, that I am committed to finding the efficiencies so that we are part of the process of discovering the resources to create our future.

I will tell you that I understand that there will be debate about some of the judgments and the decisions that we have made. There have been tough choices such as the accelerated retirement of 11

ships and 70 aircraft and the divestment of over 50 systems. I will tell you that the decision to do that was difficult. I believe with all of my heart that those were the right decisions and I am anxious to discuss them with you.

We are looking at exciting and innovative ways to capture the future and I hope that we get a chance to talk about some of them including: innovative manning experiments, Optimum Manning, and Sea-Swap, led by the commander of our surface forces. Two of the ships involved in those pilot experiments have been conducting combat operations in the theater of operations. They are happening right now. They are not things that we are talking about we are going to do some day. We are doing them right now.

So, Mr. Chairman and subcommittee members, in summary, the Navy of the United States of America is ready and it is performing. It is forward deployed, it is on scene, it is carrying out Operation Iraqi Freedom along with the sister services right now. We are focusing on the future while we are executing today.

I just want to say that the young men and women in your Nation's Navy are serving with distinction and I am extraordinarily proud to be given the opportunity to serve as the leader of this institution.

I do want to thank you. As Chairman Warner said, this subcommittee has been involved through the years in significant work that has led to the kind of Navy that we have today. I want you to know that the men and women in uniform appreciate that kind of support and the leadership of this committee.

Mr. Chairman, I thank you for the chance to be with you today and I look forward to your questions.

[The prepared statement of Admiral Clark follows:]

PREPARED STATEMENT BY ADM. VERNON E. CLARK, USN

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to appear before you. I am happy to report to you that the readiness of today's forces has never been better. The results you've seen these last few days represent the return on both the investment—and the wise judgments—of Congress and the American people in providing for our Navy. I speak for the entire fleet in thanking you for your exceptional and continuous support.

In my statements to the full committee, I outlined the Navy's overall strategic rationale for this year's proposed budget. In this statement, I will focus my comments on issues of particular relevance to this subcommittee.

YOUR NAVY—TODAY AND TOMORROW

Today, there are 164 ships on deployment, over half of the Navy; this includes 7 of 12 aircraft carriers, and 9 of our 12 big deck amphibious ships (LHA/LHD). They are deployed in support of the Nation's interests in the Persian Gulf, the Mediterranean, the Indian Ocean, and the Western Pacific.

In addition, over 75 percent of the Military Sealift Command's (MSC) total force is operating in direct support of the war on terrorism and Operation Iraqi Freedom (OIF). Over 130 ships, including all 19 of our newest large, medium-speed, roll-on/roll-off (LMSR) ships and all 8 of our fast sealift ships have been activated; when combined with other MSC-owned or chartered shipping, MSC has more than 210 ships committed to the sealift of the joint team, the replenishment of Navy carrier battle groups and amphibious ready groups, and on special mission assignments around the globe.

All of these forces are around the world, around the clock, operating with great effect from the vast maneuver area that is the world's oceans and seas. As the 21st century continues to unfold, it is clear your Navy will continue to be a vital part of America's defense.

In this age of unpredictability, with transnational terrorists and regional aggressors pursuing asymmetric strategies, our Navy's ability to sustain a high level of operations and swiftly respond to a broad range of scenarios will require naval forces that are widely dispersed, fully netted, and seamlessly integrated with joint forces.

These are the capabilities that are central to our Sea Power 21 vision—described in my statement before the full committee—and the capabilities we are pursuing in this year's budget.

OUR FISCAL YEAR 2004 BUDGET REQUEST

Last year, we made plain that current readiness and manpower were our focus and that we would get after future readiness—the ships, aircraft, and capabilities needed for tomorrow's Navy—this year.

We have benefited enormously from the \$7.1 billion added to our current readiness accounts in the last 3 years. It has produced the most ready force in our history, helped us create a surge capability, and reduced our immediate operational risk. At the same time, we are enjoying the highest retention in our history; our leaders in the fleet have helped us dramatically reduce our manning gaps at sea. Without question, our focus on these efforts has been a key contributor to both our success in the global war on terrorism and in our effort to disarm the Iraqi regime.

This budget request sustains these current readiness and manpower gains. More importantly, it brings our guns to bear on our future readiness to enhance the Sea Power 21 capabilities that will be core to our success: agility, precision, reach, persistence, and decisive power.

Sea Power 21 and the global concept of operations (CONOPS) will provide our Nation the kind of innovation and force structure that will enable our Navy to operate more effectively as a netted, distributed, joint force. Our vision is more than just hardware; it provides the framework to organize, integrate, and transform our Navy to realize opportunities and navigate the challenges ahead.

I discussed many of these in my earlier statement to the full committee; innovations like our Optimal Manning experiment and Sea-Swap programs are part of the Sea Power 21 process, and they are reaping benefits already. U.S.S. *Milius* (DDG-69) for example, achieved a 23-percent reduction in crew size and focused their combat capability; *Milius* was one of the combatants that dispatched Tomahawk cruise missiles in OIF.

Our Navy-Marine Corps Tactical Aviation Integration plan brings our Navy and Marine Corps team closer together, enhancing interoperability and teamwork, and at the same time improves our tactical aviation affordability for the future. Without question, we will continue these kinds of innovations, to improve both our effectiveness and our efficiency.

This year's budget request did involve some tough choices—the right choices—to balance our current and future risk and to prepare for both today and tomorrow. Sea Power 21 honed our ability to make these choices by focusing our investments on both the right capabilities—Sea Strike, Sea Shield, and Sea Basing—and against the right capability gaps—the tough, near-land environment where potential enemies will come after us in the unified battlespace of the future.

Our direction to Navy leadership was to weigh the risks, divest ourselves of programs and systems that did less to enhance our warfighting capability, and begin to realize the potential of Sea Power 21. We looked hard at older systems with lesser capabilities, limited growth potential and high operating and support costs and ultimately decided to accelerate the retirement of 11 ships and 70 aircraft and divest more than 50 systems. We found these preferred accelerated cuts in our least capable type-model series would produce \$1.2 billion across the FYDP for recapitalization, modernization of other platforms, and investment in Sea Power 21—without compromising our ability to accomplish our missions.

Accelerating the retirement of the *Spruance*-class destroyers, the baseline one *Ticonderoga*-class cruisers, and selected *Oliver Hazard Perry*-class frigates was a difficult decision—but the right decision—and one based on the capabilities needed for both today's and tomorrow's threat environment. These ships are significantly less capable and survivable in the near-land threat environments we'll see in the future. They require additional manning to operate because they lack many of the optimal manning technologies of our newer ships. Most importantly, they provide either redundant or significantly less effective strike and air defense capabilities than our other platforms. In every case, continuing to operate these ships for the few years remaining in their service lives adds little to our aggregate warfighting posture and hampers our ability to move forward with critical recapitalization and transformation efforts.

We recognize that the total number of ships in the inventory has a quality all its own; after all, one ship can only be in one place at a time. However, as we wargame and analyze the risks inherent in tomorrow's threat environments, it is already becoming clear that the type and mix of ships in the future fleet is critically important to the success of future campaigns—not just for the Navy, but for the joint force. Accelerating the retirement of these selected ships adds little risk in the near-term, and helps significantly in facilitating our transition to the numbers, type, and mix of ships we will require for the range of missions we anticipate in the 21st century—reducing our future risk.

INVESTING IN SEA POWER 21—CAPABILITIES TO PROGRAMS

In this year's budget, there is a clear link between the capabilities our Navy needs and the programs in which we are investing. Sea Power 21 prescribes a strategy-to-concepts-to-capabilities continuum by which our forces will exploit the opportunities that precision, reach, and connectivity give us.

Our fiscal year 2004 submission requests seven new construction ships—two more than last year—and several conversions. This fundamentally goes to our *Sea Basing vision*; after all, the fleet is the foundation of our ability to project both offensive fires and defensive protection. Our immediate fiscal year 2004 investment of \$12.2 billion in shipbuilding and conversion includes:

- Three *Arleigh Burke*-class DDGs. These ships, and their robust strike, undersea warfare and Aegis air defense capabilities will be a mainstay of our future Carrier Strike Groups (CSG), Expeditionary Strike Groups (ESG), and Missile Defense Surface Action Groups for many years to come.
- One *Virginia*-class SSN. The best multi-mission submarine ever built for littoral and regional operations will be configured to conduct mining and mine reconnaissance, unmanned vehicle operations, Special Operations Forces (SOF) insertion/extraction, battle group support, anti-submarine warfare, intelligence-collection and surveillance missions, sea-control, and land attack; vastly improving payload flexibility, connectivity, and joint interoperability for our undersea forces.
- One *San Antonio*-class LPD for enhanced lift and survivability in our future Expeditionary Strike Groups.
- Two *Lewis and Clark*-class T-AKEs to sustain our more widely dispersed operating fleet in the future. These ships will include upgraded material handling and transfer systems and multi-purpose convertible cargo holds for dry stores or ammunition. They will be able to double both delivery load weight and rates of transfer.
- The remaining two of four planned SSBN-to-SSGN conversions; to more fully distribute our joint, offensive power with these independent, clandestine strike assets. The first SSGN is expected to be fully operational in fiscal year 2007.
- The first ship in our Cruiser Conversion program.
- Service life extension for three Landing Craft Air Cushioned vehicles.

We are committed to developing the kind of level stream of investment in our shipbuilding accounts needed to deliver on our Sea Basing structure and Global CONOPS operating vision. Multiyear procurement, economic order quantity, and carefully implemented incremental funding practices help deliver long-lead materials in a cost-effective manner, stabilize the production path, and in our view, reduce per unit cost of ships and increase the shipbuilding rate. We are leveraging these practices in many of our ship and aircraft procurement programs and support their continued use in the future.

We are also reaching beyond the ships listed above to more fully achieve our Sea Power 21 vision. From Langley to Halibut, Nautilus to Ticonderoga, the Navy has a legacy of shipbuilding innovation that has revolutionized our ships, aircraft, and combat systems—transforming our capability. We will capitalize on this kind of innovation in this century as well. While I discussed many of these initiatives in my earlier testimony to the full committee, there are several key programs worth mentioning.

At the top of our list is the surface combatant family of ships centered on the next-generation multi-mission destroyer DD(X), the next-generation cruiser (CG(X)), and the Littoral Combat Ship (LCS). This powerful combination of ships will provide Joint Force Commanders with a robust range of transformational capabilities across the spectrum of warfare.

From the long-range precision strike and volume-fires of DD(X), to the overland, theater and strategic ballistic and cruise missile defensive reach of the CG(X), to the ability to clear the way for the joint force in the tough littoral environment with

LCS, the Navy's future surface warships will be designed from their keels up to operate as critical elements of our dispersed, networked, joint force.

At the heart of this family is DD(X). As the primary precision strike fires provider of the "family," DD(X) will be armed with an array of land-attack weapons, Tactical Tomahawk, and the Advanced Gun System (AGS) to provide persistent, distributed, long-range, precision attack needed in support of our joint forces operating deep inland. It is a critical enabler for our Sea Strike vision, which includes the Marine Corps' Expeditionary Maneuver Warfare, Ship-to-Objective Maneuver, and Operational Maneuver From the Sea concepts.

DD(X) will take advantage of advanced stealth technologies to be less detectable and more survivable to enemy attacks than the ships it will replace and will be a key component of future Expeditionary Strike Groups. An open architecture, distributed combat system will support a "plug and play" environment in which to operate AGS, an advanced vertical launching system and a Multi-Function Radar/Volume Search Radar suite. Other features on DD(X) will include an advanced hull form, integrated electric drive propulsion, optimal manning, and extensive automation.

Our DD(X) research and development effort is also the baseline that will enable us to keep pace with today's rapid technological advances; it will spiral promising technologies to both CG(X) and LCS. It will also enable us to upgrade in-service Aegis cruisers and destroyers with selected leading-edge technologies to ensure this vital core of our legacy, multi-mission fleet will maintain operational effectiveness throughout their lifetimes and until the DD(X) and CG(X) programs come to fruition. In fiscal year 2004, we are committing \$1.058 billion in Research, Development, Test, and Evaluation, Navy (RDTEN) for further development of the electric drive, power grid, and combat system components and anticipate the lead ship contract award in fiscal year 2005.

The Littoral Combat Ship is our most transformational effort and number one budget priority. It will capitalize on emerging unmanned vehicle technologies and deliver the focused Sea Shield missions of Mine Warfare (MIW), Surface Warfare (SUW), and Anti-Submarine Warfare (ASW). It will provide the fast, affordable, focused-mission capability that will sustain our access and enhance our ability to establish sea superiority not just for our Carrier Strike Groups and Expeditionary Strike Groups, but for all the joint logistics, command and control and pre-positioned ships that must transit the critical littoral threat area to move and support forces ashore.

Our modeling and wargaming with smaller, fast, highly-maneuverable ships that simulate LCS capabilities have produced results that show LCS increases our warfighting effectiveness in the littoral environment. LCS achieved 70 percent of the "kills" during simulated choke-point transits and reduced the vulnerability—and losses—of our other carrier and expeditionary strike group ships to submarine torpedo attack in the littorals. Additionally, LCS ships modeled with mine warfare capability provided more effective organic mine warfare support than similarly equipped DDGs—especially during opposed scenarios.

Numerous real-world tests have also been conducted with experimental craft to gather tangible data to determine the optimal hull form for the LCS. In fiscal year 2004, we are requesting \$79 million for hull form, \$66 million for mission module development and integration, and \$13 million for requirements analysis in RDTEN funding. The Integrated Requirements Document has been completed and we anticipate beginning construction of the first LCS in 2005.

We are also investing in other platforms to support Sea Basing of the joint force. CVN-21 will be the centerpiece of our Carrier Strike Groups in the future and is scheduled for delivery in fiscal year 2014. It will combine the most critical technology advancements of the CVN(X)-1 and CVN(X)-2 programs and deliver them on the CVN(X)-1 schedule we defined last year. The fiscal year 2004 budget request provides \$1.5 billion in RDTEN and advanced procurement for the first CVN-21 and programs for split-funded construction beginning in fiscal year 2007.

Our vision for the Maritime Pre-positioning Force Future (MPFF) and tomorrow's amphibious force continues to develop into a bright and exciting future for the Navy-Marine Corps team. The Joint Forcible Entry Operations study and Defense Science Board Sea Basing study will help refine our effort and posture us for enhanced sea basing of Navy and Marine Corps assets.

We expect MPF(F) ships to serve a broader operational function than current pre-positioned ships, creating greatly expanded operational flexibility and effectiveness. We envision a force of ships that will enhance the responsiveness of the joint team by the at-sea assembly of a Marine Expeditionary Brigade that arrives by high-speed airlift or sealift from the United States or forward operating locations or bases. These ships will off-load forces, weapons, and supplies selectively while re-

maining far over the horizon, and they will reconstitute ground maneuver forces aboard ship after completing assaults deep inland.

Other advances in sea basing could enable the flow of Marine and Army Forces at multiple and probably austere points of entry as a coherent, integrated combined arms team capable of concentrating lethal combat power rapidly and engaging an adversary upon arrival. The ability of the Naval Services to promote the successful transformation of deployment practices of the other Services will dramatically improve the overall ability of the Joint Force to counter our adversaries' strategies of area-denial and/or anti-access.

We will know more about these requirements in the next year and will consider other joint missions like the need for an afloat forward staging base, joint command and control ship, and afloat medical capabilities for the Joint Force for extended periods as well. We are investing in RDTEEN to examine the future MPF and perhaps other alternative concepts.

We have incrementally funded LHD-8, the last ship in the LHD-1 class. It will be the first big deck amphibious ship powered by gas turbine propulsion, all-electric auxiliary systems, and a computer-based Machinery Control System. These changes are expected to realize significant lifecycle cost savings and serve as the basis for spiral development into the future LHA replacement (LHA(R)) class of ships.

The near term LHA(R) development effort will be focused on our joint forcible entry needs and integrating several new capabilities including the Joint Strike Fighter, MV-22 Osprey, and Advanced Amphibious Assault Vehicle (AAAV). Our fiscal year 2004 budget request of nearly \$65 million in RDTEEN supports design and procurement of the first ship in the class (LHA(R)1) with a planned ship construction award in fiscal year 2007. The configuration for remaining ships in the class will be deferred until the Joint Forcible Entry Operations study is complete.

Our Sea Shield vision also has particular relevance to this subcommittee. Sea Shield is about extending our defenses beyond naval forces, to the Joint Force and allies and providing a defensive umbrella deep inland. The capabilities needed for Theater Air and Missile Defense and Sea/Littoral Control—including anti-submarine warfare (ASW), ship self defense, and mine warfare (MIW)—are part of our Sea Shield construct. Our budget request and program includes significant funding for these capabilities.

In Theater Air and Missile Defense, we are pursuing technologies that will enable us to defeat emerging cruise missile threats and ballistic missiles in the boost and ascent phase. This difficult mission requires advanced network-centric operations and high levels of weapon system technology, seamlessly fused to produce the integrated air picture and the engagement profile needed for success. This involves:

- Fiscal year 2004 investments include upgrades to the Aegis weapon system and further development of the DD(X) destroyer's volume search radar, the E-2C Advanced Hawkeye (Radar Modernization Program (RMP)) aircraft, and the Extended Range Active Missile (ERAM). Networks will encompass the cooperative engagement capability (CEC) and Link-16 systems and weapons will be the extended range, over-the-horizon, and ballistic missile defense versions of the standard missile, and new models of the advanced medium-range air-to-air missile (AMRAAM).
- Our sea-based missile defense programs experienced tremendous success on the test range during 2002, scoring three hits and conducting three successful tracking events; proving in the near term that Aegis BMD has the ability to destroy ballistic missiles in space and can provide surveillance and cueing of intercontinental class weapons directed at our homeland. We are accelerating work with the Missile Defense Agency (MDA) to deploy initial sea-based ballistic missile defense systems in fiscal year 2004. In partnership with MDA, we will transfer U.S.S. *Lake Erie* (CG-70) to MDA to facilitate a more robust testing program for missile defense. In turn, MDA is requesting funding to modify a number of Aegis DDGs to bolster homeland defense surveillance; equip a larger number of Aegis combatants with a BMD engagement capability; and acquire a number of SM-3 missile interceptors to provide the capability at sea to intercept short- and medium-range ballistic missiles in the boost and ascent phases of flight. We will build on our successes and develop a vital capability for our Nation by 1 October 2004.
- The *Ticonderoga*-class cruiser conversion program will extend the Aegis combat system's capabilities against projected threats well into the 21st century and, with the DDG-51 destroyers, serve as the bridge to the surface combatant family of ships (DD(X), LCS, and CG(X)). The cruisers will provide multi-mission offensive and defensive capabilities, and operate independently or as part of CSG, ESG, and Surface Action Groups (SAG)

well into this century. Core to these conversions is installation of the Cooperative Engagement Capability, which enhances and leverages the air defense capability of these ships, and the 5"/62-caliber Gun System with Extended Range Guided Munitions to be used in support of Sea Strike and Marine warfighting needs. This program is a mid-life upgrade that will provide selected Aegis cruisers with land attack, force protection, and Area Air Defense Commander capability while extending the service life to over 35 years. These converted cruisers will be viable candidates for a ballistic missile defense role. The first conversion begins in fiscal year 2004 and our budget requests \$194 million.

- The Cooperative Engagement Capability (CEC) will enable battle group and joint task force ships and aircraft to act as a single, geographically dispersed combat system. CEC has demonstrated significantly improved battle force air defense capabilities by integrating multiple sensors into a single, real-time, fire-control-quality composite track picture. In the future, it will integrate airborne radar and IFF sensors into the battle group composite tracking network providing long-range detection and tracking with integrated fire control for improved over-the-horizon battle group air defense. CEC will provide the fleet with greater defense-in-depth and the mutual support required to confront the evolving threat of anti-ship cruise missiles and theater ballistic missiles. We anticipate the Block 2 Decision Milestone in April 2003 and are requesting \$226 million in the fiscal year 2004 budget.
- The E-2C Advanced Hawkeye (Radar Modernization Program) will enable our Navy to deploy an unprecedented capacity to conduct defensive air warfare deep inland against cruise missiles and aircraft. The range and overland detection capabilities achieved with the Advanced Hawkeye, combined with the networking of CEC, will expand significantly our ability to defend critical ports, airfields, and Joint Forces ashore—initially with Aegis Standard Missiles and F/A-18E/Fs Super Hornets using the Advanced Electronically Scanned Array (AESAs) radar and AMRAAM, and ultimately with the next-generation over-the-horizon ship-launched ERAM. The fiscal year 2004 budget invests \$352 million for continued development and aircraft production begins in fiscal year 2008.
- The ERAM is the next variant of the family of Standard Missiles (SM-2 Blocks III, IIIA, IIIB, Block IV). It marries much of the proven Standard Missile motor with the AMRAAM missile seeker to enable the extension of naval cruise and ballistic missile defense overland. We are requesting \$34 million in the fiscal year 2004 budget to develop this missile.

Sea/Littoral Control is central to our ability to assure access and freedom of maneuver for Joint Forces moving from the sea to objectives inland. We continue to invest in ASW, Ships Self Defense, and MIW technologies and programs that will counter surface and subsurface threats, such as modern ultra quiet submarines, small, fast surface combatants, and an array of floating, moored, and buried mines.

ASW remains a challenging task, not just in the deep ocean, but also in the shallow littoral regions and against modern quiet submarines. Programs and technologies that will enhance our warfighting effectiveness in this environment include:

- The new MH-60 helicopters, which will carry reconfigurable sensors and weapons customized for the littoral environment, will link their data to the force as they perform anti-mine, anti-submarine, and anti-surface sea control missions. The MH-60R helicopter with its Advanced Low Frequency Sonar will specifically provide improved capability against submarines in the littorals. In fiscal year 2004, we are requesting 6 MH-60R and 13 MH-60S.
- Recapitalization of our Maritime Patrol capability—currently conducted by aging P-3C aircraft—with the Multimission Maritime Aircraft (MMA). MMA will transform the Maritime Patrol/Reconnaissance force by fully integrating manned and unmanned vehicles. In fiscal year 2004, we are requesting \$76.2 million in RDTEN funding and anticipate initial operational capability (IOC) in the 2012 timeframe.
- Initial testing of the Surveillance Towed Array Sonar System (SURTASS) Low Frequency Active (LFA) in the Western Pacific has demonstrated detection capability that provides us added assurance that we can deal with the diesel-electric threat as it becomes even quieter, and we have accelerated development of an Advanced Deployable System (ADS) off-board sensor variant, to start in fiscal year 2005, that will eliminate the requirement to cable the system to a shore site.

- Acquiring the Automatic Radar Periscope Detection and Discrimination (ARPDD) system will provide further enhancements to our capability for large area search. Additionally, the capability for our surface combatants to survive attacks from threat torpedoes will be enhanced through the Surface Ship Torpedo Defense effort.
- We will fund the Common Undersea Picture (CUP) to integrate undersea warfare sensors across multiple, dissimilar ASW platforms and nodes for a shared tactical picture. We will begin to outfit carrier strike groups in fiscal year 2005. CUP will greatly enhance our netcentric capability in undersea warfare mission planning, vulnerability assessment, situational awareness, and collaboration.
- Large area ASW cueing and search is supported via funding of the USQ-78B acoustic processor for the P-3C AIP fleet. This enhancement provides the capability for Improved Extended Echo Ranging (IEER) processing which is a high search-rate acoustic tool focused on the shallow water, acoustically harsh environment.
- The fiscal year 2004 budget also supports a fiscal year 2006 IOC of Mk 48 Mod 7 Common Broadband Acoustic Sonar System (CBASS) heavy-weight torpedo specifically designed for use against advanced diesel submarines employing countermeasures in the difficult littoral environment. Also supported is the fiscal year 2004/2005 IOC of the MK-54 Lightweight Torpedo (LWT) for use in shallow waters by helicopter and patrol ASW aircraft against the diesel threat, significantly enhancing littoral capabilities.
- Finally, the success of the Acoustic Rapid COTS Insertion (ARCI) program in providing significant improvement in ASW sensor processing for our submarine force has spawned similar efforts in submarine combat control, communications, and upgrades to the surface fleet's SQQ-89 combat suite. These programs validate the Navy's decision to use commercially available technology to deliver superior performance at less cost.

We are investing in Ship Self Defense programs and systems that will enhance our capability to defeat small and swarming boats. In the far-term, we are investing in the LCS to enhance this capability dramatically. This includes:

- In the near term, our Navy will continue investment in the Rolling Air Frame Missile and the NATO Evolved Sea Sparrow missile as part of our layered defense against anti-ship cruise missiles.
- The Phalanx Close-in-Weapon System (Block 1B) that will upgrade our current terminal defense capability against anti-ship cruise missiles and high-speed aircraft penetrating outer fleet defensive envelopes. In surface mode, the Block 1B program will defend against small, fast, surface craft and slow flying aircraft and include better sensor support and lethality for close-in engagements. The CIWS Block 1B Upgrade Kit procurement remains a high surface warfare priority.
- The Surface Electronic Warfare Improvement Program (SEWIP), a spiral development effort initiated to provide a robust, full spectrum electronic warfare system following cancellation of the Advanced Integrated Electronic Warfare System in fiscal year 2002. SEWIP will build on the legacy SLQ-32 system to field capabilities against next-generation threats.
- Pursuing installation of minor caliber guns on our deploying ships to improve our ability to counteract a small boat threat in the 0 to 8,000 yards range. We soon will install stabilized minor caliber guns on two DDGs. Arming the MH-60R and MH-60S helicopters mentioned above provides an additional layer of lethality against small boat attack.

We have increased our investment in our Mine Warfare plan; adding over \$67 million in fiscal year 2004 and \$482 million across the FYDP since last year's budget. Major changes from last year's plan include additional funding for LCS MIW mission modules, Mine Countermeasures (MCM) ship diesel engine replacements, MCM ship operations and maintenance, and acceleration of assault breaching systems R&D.

Our MCM certification plan will assure access to naval and Joint Forces by defeating the asymmetric mine threat proliferating worldwide. It supports our commitment to a dedicated MCM force while simultaneously fielding an organic MCM capability to the CSGs beginning in 2005. The stealthy and lethal LCS and its MIW module will add new dimensions to our ability to counter mines and is the future of our organic battle group capability. Currently:

- We are investing in the ship-launched Remote Minehunting System (RMS) for six DDG-51 Flight 2A ships beginning in fiscal year 2005. RMS

is also a candidate for the LCS MIW mission module—the future of our organic battle group capability.

- We are also investing in several unmanned undersea vehicle (UUV) systems. The Long-Term Mine Reconnaissance System (LMRS) will provide a covert mine-reconnaissance capability from SSN 688 class submarines and is on track for IOC in fiscal year 2005. The Mission Reconfigurable UUV, an outgrowth of the LMRS program scheduled to begin development in fiscal year 2004, will provide “plug and play” sensor packages for potential missions such as ISR, Tactical Oceanography, Remote ASW tracking, and monitoring for weapons of mass destruction. The fiscal year 2004 budget invests \$82 million in this program.
- We will purchase five organic mine systems to be integrated in the MH-60S helicopter. Additionally, the Rapid Airborne Mine Clearance System (RAMICS), a helicopter-borne gun system, will provide us the capability to neutralize surface and near-surface mines with a special 30mm supercavitating projectile. This projectile is specially designed to penetrate a submerged or surfaced mine casing—causing destruction of the mine. RAMICS IOC is scheduled for fiscal year 2007.

Sea Strike is about projecting precise, responsive, and persistent offensive striking power—in the form of weapons, Marines and Special Operations Forces. Three of its critical capability subsets are Time Sensitive Strike, Persistent Intelligence, Surveillance, and Reconnaissance and Marine Corps Ship-to-Objective Maneuver; these capabilities are of particular interest to the subcommittee.

Time Sensitive Strike investments will enable us to link persistent sensors, emerging knowledge enhancement and decisionmaking systems and long range precision weapons against an array of targets in ever-shortening time periods. We are already pursuing investments that will greatly reduce our target planning timelines and enhance our striking power. This includes:

- The Tactical Tomahawk (TACTOM) Block IV upgrade that preserves the Tomahawk's long-range precision-characteristics and adds an in-flight retargeting capability that will enhance responsiveness and flexibility at a lower total cost than existing variants. The fiscal year 2004 budget requests full rate production under a 5-year multiyear procurement (fiscal year 2004–2008) contract.
- Procurement of Precision-Guided Munitions (PGM) that will continue to be a high priority. Laser Guided Bomb production is currently at maximum rate, the Joint Direct Attack Munition is forecast to meet maximum rate by August 2003, and we are increasing our inventory of the Joint Stand Off Weapon and ramping up production of a new variant. Our partnership with the Air Force in several of our munitions programs will continue to help optimize both our inventories and our research and development investment. In fiscal year 2004, we are requesting over \$911 million.
- The Joint Fires Network (JFN) that will integrate the best elements of three existing systems into a converged joint architecture and automates, coordinates, and correlates the multiple data streams to provide time critical fire control solutions for advanced weapon systems. It reduces the sensor-to-shooter timeline from hours to minutes; provides precision targeting data for coastal and deep fire support; and uses data from responsive and persistent ISR assets to improve both the Common Operational Picture and our intelligence preparation of the battlespace. The fiscal year 2004 budget includes \$159 million for JFN. JFN is at sea in OIF and will continue to serve as a critical building block for our Sea Strike vision and enabled by FORCEnet.

Persistent Intelligence, Surveillance, and Reconnaissance will be a key enabler for both our Sea Strike and Sea Shield capabilities. UUVs, discussed earlier, and unmanned air vehicles (UAV) are a key component of our ISR future. We are committed to accelerating development of UAVs and procuring an operational capability as soon as possible. They will provide persistent and comprehensive situational awareness; key to projecting both our offensive and defensive power. This includes:

- Two Global Hawk Maritime Demonstration (GHMD) vehicles that will be procured from the Air Force in fiscal year 2005 for maritime CONOPs development, sensor technology experimentation, and fleet orientation prior to the introduction of the Broad Area Maritime Surveillance (BAMS) UAV in fiscal year 2009. The BAMS UAV will be a multi-mission ISR system to support strike, signals intelligence, and communications relay while operating independently or in direct collaboration with other assets in the maritime environment. We are requesting \$25 million in the fiscal year 2004

budget submit and anticipate IOC in fiscal year 2009. We will also continue our investment in the Unmanned Combat Air Vehicle/Navy (UCAV/N) and have budgeted for two science and technology demonstrators in this request.

- Our renewed interest in the Fire Scout/Naval Vertical Takeoff and Landing Tactical UAV (VTUAV) and will evaluate its utility for LCS and potentially other air capable ships. We will also examine its ability to carry modular mission payloads and operate using the Tactical Control System, and Tactical Common Data Link. It will provide real time information, surveillance, reconnaissance, and targeting, communications relay, and battlefield management.

Ship to Objective Maneuver: Together with our number one joint partner, the United States Marine Corps, we will provide the capability to deploy, support, and reconstitute a persistent, operationally flexible, expeditionary capability across the spectrum of warfare. Currently:

- We are working to ensure that near-, mid-, and long-term Naval Surface Fire Support (NSFS) capabilities are met. In the near-term, we anticipate IOC of the Naval Fires Control System (NFCS) to connect ships digitally to ground forces ashore in fiscal year 2004. In the mid-term, the Navy is developing Extended Range Guided Munition (ERGM) and Autonomous Naval Support Round (ANSR) with both systems headed for a "shoot off" in fiscal year 2005 to determine which round will provide greater range, lethality, and accuracy and ultimately be incorporated into the Navy's arsenal.
- The Commander, Fleet Force Command and the Office of Naval Research have also taken the lead in experimenting with the electromagnetic rail gun technologies to determine its feasibility and perhaps accelerate this enhancement via the Sea Trial process. We are requesting nearly \$35 million in for the ERGM and NFCS alone in fiscal year 2004.

CONCLUSION: A COMMITMENT TO VICTORY

The President has called upon us to "be ready to strike at a moment's notice in any dark corner of the world." We are answering that call in the global war on terrorism and in the opening salvos of Operation Iraqi Freedom. Your support has been critical to our success.

The fiscal year 2004 budget submission enhances our ability to answer this challenge in the years ahead. By investing in our Sea Power 21 vision, the fiscal year 2004 request balances near term and future readiness and risk, charts a course to deliver decisive capabilities, and enables our most valuable asset—our people—the means to do the mission to the very best of their ability.

I thank the subcommittee for your continued strong support of our Navy and our active, Reserve, and civilian sailors. Working together, I am confident that we will be victorious in the global war on terrorism and in Operation Iraqi Freedom, leading to a more stable and peaceful world.

Senator TALENT. Thank you Admiral, and we appreciate both your excellent statement, which will of course go in the record, and your excellent summary of it. We will hear General Hagee and then have a chance for questions.

General, thank you for coming and giving us your time this afternoon, and we look forward to hearing your statement.

STATEMENT OF GEN. MICHAEL W. HAGEE, USMC, COMMANDANT, UNITED STATES MARINE CORPS

General HAGEE. Thank you. Mr. Chairman, Senator Kennedy, and distinguished members of this subcommittee, it is truly an honor for me to be here to represent your Marine Corps.

I would like to thank this subcommittee for its strong support of the issues and programs that are of vital importance to the readiness of your Marine Corps and the Navy-Marine Corps team. Along with our sister Services, the Marine Corps continues to play a key role in the global war on terrorism, in the establishment of stability and security in many of the world's trouble spots, and of course in

Operation Iraqi Freedom. The actions of your marines along with the attached Navy corpsmen and Seabees over the past 2 weeks in Iraq attest to their morale, their readiness, and warfighting capability better than any words I could say today.

We have 67 percent of our operating forces forward deployed. We have almost 80 percent either forward deployed, forward stationed, or forward based. They are performing magnificently.

I must add to what the CNO said that we are able to accomplish this mission today because of the support and funding Congress has provided us over the last couple of years. We ask for your continued support and funding in order to remain ready for the future.

Even as we fight the current war, we, along with the Navy, are also developing enhanced and, I would say in some cases, new operational concepts that will make us even more responsive and effective in the future. I would like to spend a few minutes discussing one such operational concept, and that is Sea Basing. Hopefully this discussion will bring together some of the tenets of Seapower 21 and expeditionary maneuver warfare.

As you are well aware, the idea of Sea Basing is not new to the Navy-Marine Corps team. From the island-hopping campaign of World War II to the more recent non-permissive, non-combatant evacuation operations in Africa and the Middle East, we have projected combat power ashore from the sea for many years.

In Operation Enduring Freedom, however, we took this concept to another level by projecting a composite force from the sea approximately 400 miles inland, securing the airfields at Rhino and Kandahar, Afghanistan. The primary command and control node remained at sea. However, because of platform limitations, we established an intermediate support base ashore in a second country.

Recent and projected technological advances in ship and aircraft design, communications, and distribution systems provide us the opportunity to move beyond negotiating political access or seizing an enemy beachhead in order to build sustainment ashore before moving to the objective. In essence, we believe we will be able to conduct the initial reception, staging, onward movement, and integration that you saw over the past 2 or 3 weeks in Kuwait at sea.

Once ready, the force would maneuver from the sea base to the objective, with the majority of its command and control, logistics tail, and supporting fires capabilities remaining at sea. Such a capability would significantly enhance the Joint Force Commander's flexibility and speed by providing him options for employing forward-deployed forces independent of fixed inland bases, airfields, and ports.

The CNO and I believe such an operational concept will become more important for the Nation as we face a future characterized by uncertain and unreliable access to operate from or through other nations' territorial space as well as the increasing access to lethal, affordable weapons technology and sensors that will enable potential adversaries to establish access denial strategies.

This enhanced sea basing operational concept is within reach. It rests on four pillars and the CNO has already mentioned those four pillars: one, an enhanced command and control network that we call FORCENet; two, a set of offensive capabilities we call Sea

Strike; three, a set of defensive capabilities we call Sea Shield; and four, a set of sustainment capabilities we call the Sea Base.

These capability sets could be expanded or contracted to meet a range of operations from peacetime exercises to forceable entry of a brigade-sized force. As a national capability, Sea Basing would cross service lines and would rely on the establishment of standardized interfaces for both logistics and communications, so that each Service can plug and play with the capabilities it brings to the battlefield.

I would like to stress that sea basing is not a single thing or a single platform. Rather, it is an aggregation of capabilities located over the horizon that can support a wide range of Joint Force Operations. We believe that this sea basing operational concept will provide the joint commander freedom of movement by using sea as maneuver space, freedom of action by not requiring access, a reduced vulnerability to attack, and an increased agility and speed.

Many programs within the fiscal year 2004 budget proposal help us move toward an enhanced sea basing capability. They involve platforms that provide flexibility and survivability in light of future threats, weapons systems that are lighter or more lethal, and research, development, and testing in order to identify leap-ahead technologies. Some examples: the LPD-17, the LHR replacement development, future maritime pre-positioning force ships, the Advanced Assault Amphibian Vehicle, and the Lightweight 155 all support sea basing.

The MV-22, the Joint Strike Fighter short-take-off/vertical-landing (STOVL), the Cobra-Huey upgrades will move us closer to an all-vertical air arm where marines take advantage of operations from the sea base. Several command and control improvements will bolster our capability for interoperable joint command and control under the concept of FORCENet.

The Littoral Combatant Ship that the CNO just mentioned will provide anti-access capabilities with combat systems for mine interdiction warfare, anti-sub warfare, and anti-surface warfare, while the DD(X) Land Attack Destroyer will provide long-range precision and volume naval surface fires to support operational maneuver from the sea.

Other organizational enhancements that your marines are working on include TACAIR integration, expeditionary strike groups, and Special Operations Command support. These concepts promise more efficient and effective operations in some critical areas. TACAIR integration of our strike fighter assets will build synergy between our Navy and Marine Corps aviation communities while saving substantial resources now and beyond the FYDP.

Expeditionary strike groups tie the operations of our traditional ARG-MEUs to enhanced naval warfighting platforms to give the entire group more survivability, lethality, and flexibility with no increase in costs.

The initial integration of Marine capabilities to support Special Operations Command takes advantage of Marine training that can relieve some of the burdens on our Special Forces, freeing them to concentrate on missions that only they can perform.

As you have seen in Iraq over the past couple of weeks, we are ready to support the Nation as part of a Joint Force today. We are

on solid ground regarding our mission and our future direction. We will remain your only sea-based, rotational, truly expeditionary combined arms force, ready to answer the call as part of an integrated joint force.

Sir, I look forward to your questions.

[The prepared statement of General Hagee follows:]

PREPARED STATEMENT BY GEN. MICHAEL W. HAGEE, USMC

Chairman Talent, Senator Kennedy, distinguished members of the subcommittee; it is my honor to report to you on the state of your United States Marine Corps. First, on behalf of all marines, I want to thank the committee for your continued support. Your sustained commitment to improving the warfighting capabilities of our Nation's Armed Forces and to improving the quality of life of our service men and women and their families is vital to the security of our Nation, especially now, while our Nation is at war.

I. INTRODUCTION

The Navy-Marine Corps team continues to play a key role in the global war on terrorism and in the establishment of stability and security in many of the world's trouble spots. Marines, both active and Reserve, are operating side-by-side in Iraq, as well as in diverse locations, from Afghanistan, the Horn of Africa, Turkey, the Georgian Republic, Colombia, Guantanamo Bay, and the Philippines. The actions of your marines—along with Navy Corpsmen and SeaBees—attest to their morale and readiness better than any words I could say here today.

Marine Corps operations throughout the past year have highlighted the versatility and expeditionary nature of our forces. Missions in support of Operations Enduring Freedom and Noble Eagle marked the most visible accomplishments of our forward-deployed forces. Marine Air Control Squadrons continue to provide air control, surveillance, and air traffic control support to Operation Enduring Freedom during their deployments to the Central Command area of responsibility. Elsewhere, the Marine Corps continues to support Operation Joint Forge in the Balkans by sending civil affairs teams to Bosnia.

Even as the Marine Corps saw one of our busiest years in terms of operational deployments, participation in realistic, worldwide exercises remained critical to supporting the Combatant Commander's Theater Security Cooperation Plans and ensuring that we maintained a ready and capable force. Over the last year, marines participated in more than 200 service, joint, and combined exercises. These included live fire, field training, command post, and computer-assisted exercises. Participants varied in size from small units to Marine Expeditionary Forces. Overseas, Marine Expeditionary Units (Special Operations Capable) conducted exercises in Jordan, Italy, Croatia, Tunisia, the Philippines, Australia, Thailand, and Kuwait.

At home, Marine Reserve units were designated as "on call" forces to support the Federal Emergency Management Agency's role in homeland security. In addition, the Marine Corps also conducted numerous training operations and internal exercises. This important training helps develop individual and unit proficiency and competency. It also allows the Marine Corps to examine unit operational skills and ensures that each unit has the capabilities required to execute our full range of missions.

The Marine Corps continues to contribute to the Nation's counterdrug effort, participating in numerous counterdrug operations in support of Joint Task Force Six, Joint Interagency Task Force-East, and Joint Interagency Task Force-West. These missions are conducted in the Andean region of South America, along the U.S. Southwest border, and in several domestic "hot spots" that have been designated as High Intensity Drug Trafficking Areas. Individual marines and task-organized units are assigned to these missions in order to provide support for domestic drug-law enforcement throughout the United States, and to provide conventional training to military forces in South America that execute counter-narcotics missions. Marine operational and intelligence teams also support Colombian military efforts to combat narco-terrorism. Marines of our Reserve Forces have executed the majority of these missions.

Our successes in these global operations and exercises have not been achieved alone. We have worked closely alongside the Navy, our sister Services, and Federal agencies to realize the true potential of joint, interoperable forces in the new environment of 21st century warfare. The operational and personnel readiness levels we have been able to maintain directly reflect the strong, sustained support of Congress

in last year's National Defense Authorization and Appropriations Acts. In fiscal year 2004, we seek your continued support for the President's budget so we can consolidate the gains made to date, improve those areas where shortfalls remain, and continue transforming the way the Navy-Marine Corps team will fight in the 21st century.

II. BUILDING ON SUCCESS

The President's fiscal year 2004 budget, together with your support, will provide a strong foundation on which we can continue building on our successes. Our focus is on improving our ability to operate as an agile, lethal, ready, and effective member of a broader Joint Force that takes the complementary capabilities provided by each Service, and blends them into an integrated and effective force for meeting future challenges.

Increases in our military personnel accounts have a positive effect on the retention of our most valued assets—our marines. Yet, the projected trend of personnel costs, especially as they include accruals for retirement and health care, are increasing faster than the budget used to pay those costs, resulting in increased pressure on our other accounts. Given the increasing pressure to modernize and transform the force, the Marine Corps is constantly working to identify and assess program tradeoffs to enable the most effectively balanced approach between competing demands and programs. These tradeoffs occur within a larger context of the Department's overall program tradeoff decisions, which is driving the Navy and Marine Corps to work more closely than ever before in our planning, budgeting, and decisionmaking. An additional concern that complicates this process is the sizeable unfunded cost of the ongoing global war on terrorism.

Challenges also arise from the changing realities of our national security environment. The Marine Corps is committed to the idea that we will fight as an integral part of a joint team. We continue to place high priority on interoperability, shared concept development, and participation in joint exercises with our sister services. Additionally, the security environment now demands that we pay more attention to our role in Homeland Defense, our critical infrastructure, and force protection—even as we deploy more forces overseas. These challenges demand that we balance competing priorities while remaining focused on maintaining excellence in warfighting.

Adapting to a Changing, Dynamic World

While we adapt the advantages of technology to meet the changing face of warfare, we draw strength from the unique culture and core values that make us marines. We look for innovation in four broad areas to address future challenges:

- Transformational technology
- New operational concepts
- Refined organizations
- Better business practices

Innovative approaches culled from these efforts should provide insight into new capabilities that we can adapt for future warfighting. In this regard, we are currently engaged in an immediate and critical tasking to define how we, along with our partners in the Navy, intend to project naval power ashore in the 2015–2025 timeframe. This effort requires the intellectual rigor and participation of all the elements of our Marine Air-Ground Task Forces and is influencing the entire Marine Corps—from our structure and training to the way we will fight on future battlefields as an integral component of a Joint Force.

Technology and Experimentation

The plan for realizing future joint concepts consists of three closely related processes: (1) Joint Concept Development, (2) Joint Experimentation and Assessment, and (3) Joint Integration and Implementation. The overall process is more commonly known as Joint Concept Development and Experimentation. In order to ensure support and engagement throughout this process, the Marine Corps reorganized to establish three Joint Concept Development and Experimentation divisions under the cognizance of the Commanding General, Marine Corps Combat Development Command. These three organizations are key elements of Marine Corps Transformation and enable full Marine Corps involvement in Joint Experimentation and Transformation as well as the Navy's Sea Trial process for Naval Experimentation and Transformation.

The Marine Corps Warfighting Laboratory maintains cognizance over Marine Corps-specific experimentation—with a focus on the tactical level—to develop enhanced warfighting capabilities for the future. Technologies and procedures are field tested in experiments conducted with the operating forces. In addition, the lab co-

ordinates closely with the Office of Naval Research to identify promising technologies that support the next generation of warfighting capabilities.

New Concepts and Organizations

The Marine Corps is streamlining force development from concept to acquisition under the Deputy Commandant for Combat Development. Our Expeditionary Force Development System is a single system of dynamic functions integrated into a process that produces and sustains capabilities to meet the needs of the Marine Corps and the combatant commanders. The Marine Corps advocates for ground combat, aviation combat, command and control, and combat service support, as well as the Marine Requirements Oversight Council, are key participants in the process. The Expeditionary Force Development System continuously examines and evaluates current and emerging concepts and capabilities to improve and sustain a modern Marine Corps. The system is compatible with and supports naval and joint transformation efforts and integrates transformational, modernization, and legacy capabilities and processes. This integrated, concept-based driver for transformation is currently working on several ideas that will influence the future Marine Corps.

Expeditionary Strike Groups

The Marine Corps and Navy are engaged in a series of experiments that will explore the Expeditionary Strike Group concept. This concept will combine the capabilities of surface action groups, submarines, and maritime patrol aircraft with those of Amphibious Ready Groups and Marine Expeditionary Units (Special Operations Capable), to provide greater combat capabilities to regional combatant commanders. In the near future, the Navy-Marine Corps team will conduct a pilot deployment on the west coast to test the Expeditionary Strike Group concept. Navy combatants have already been incorporated within the existing training and deployment cycle of the Amphibious Ready Group. This experiment will also allow us to test command-and-control arrangements for the Expeditionary Strike Group. It will provide critical information to support the future implementation of the concept and highlight any needed changes in service doctrine, organization, training, materiel, leadership and education, personnel, and facilities.

Tactical Aviation Integration

The Navy and Marine Corps team has embarked on a Tactical Aircraft (Strike-fighter) Integration plan that will enhance core combat capabilities and provide a more potent, cohesive, and affordable fighting force. This integration is the culmination of a long-term effort to generate greater combat capability from naval fixed-wing strike and fighter aircraft, and represents a shared commitment to employ the Department of the Navy's resources as judiciously as possible. This integration has been ongoing for several years, with four Marine Corps F/A-18 Hornet squadrons operating as part of embarked carrier air wings. This Navy-Marine Corps effort will guarantee that naval aviation will be integrated as never before, and will effectively support the Marine Air-Ground Task Force and the joint warfighter. Specifically, the integration plan:

- Reinforces our expeditionary ethos;
- Provides a smaller, more capable, more affordable force for the Department of the Navy;
- Integrates Marine strike fighters in 10 Navy Carriers Air Wings;
- Integrates three Navy strike fighter squadrons into the Marine Unit Deployment Program;
- Includes the global sourcing of all DoN strike fighter assets and ensures their support to Marine Air-Ground Task Forces and regional combatant commanders;
- Provides increased combat capability forward; and
- Complements the enhanced seabasing concept.

A cornerstone of this plan is Department of the Navy funding for essential modifications as well as the flight hours and maintenance of legacy aircraft to keep them at the highest levels of readiness until the Joint Strike Fighter and F/A-18E/F are fully fielded. This requires an unwavering commitment to level funding of strike fighter readiness across the Department of the Navy. These integration-driven readiness levels will allow the Navy-Marine Corps team to surge more aircraft than what is possible today.

Enhanced Networked Seabasing

Fully networked, forward-deployed naval forces and platforms that are integrated into our seabasing capability will provide naval power projection for Joint Force Commanders. These forces will use the sea as a means of maneuver, enabling a

broad range of joint campaign operations. Sea-based operations incorporate, integrate, protect, and sustain all aspects of naval power projection, from space to the ocean floor, from blue water to the littorals and inland—without dependence on land bases within the Joint Operating Area. Seabasing will provide enhanced capabilities to the naval force, such as rapid force closure, phased arrival and assembly at sea, selective offload of equipment tailored for individual missions, and force reconstitution for follow-on employment. The traditional naval qualities of persistence and sustainment—enhanced by advanced force-wide networks—underpin the staying power and flexibility of the sea base. Naval platforms can stay on-station, where they are needed, for extended periods of time. The at-sea maneuverability of the seabase, coupled with advanced underway replenishment technologies and techniques, will ensure force readiness over time.

Integrated Logistics Capabilities

The Integrated Logistics Capabilities effort began as a unique collection of military, industry, and academic organizations collaborating to develop a future vision of Marine Corps logistics processes. The product is a set of transformational initiatives that will provide better support to the warfighter. The purpose of the Integrated Logistics Capabilities concept and process is to implement a transformation strategy, based on best practices, that provides the framework for the execution of agile, effective logistics support to the Marine Air-Ground Task Force, with the focus of streamlining the logistics chain.

Capabilities are being conceptually refined and incrementally validated in the Operating Forces as they are identified and recommended. An assessment of the Proof-of-Concept, published in November 2002 by the Center for Naval Analysis, reflected improved supply response time (68 percent reduction in time) and overall repair cycle time (33 percent reduction).

Over both the mid- and long-term, improved combat effectiveness and efficiencies in the logistics chain are expected. However, efficiencies cannot be fully realized until the people, process, and technology changes are applied across the entire operating force. The logistics transformation and process modernization, together with the cutting edge suite of technologies provided by the Global Combat Support System, will greatly enhance the combat capabilities of Marine Forces.

Reestablishment of Air-Naval Gunfire Liaison Companies

We have validated the requirement to reestablish our Air-Naval Gunfire Liaison Companies (ANGLICO). These companies will provide our commanders a liaison capability with foreign area expertise to plan, coordinate, and employ terminal control of fires in support of joint, allied, and coalition forces. ANGLICO will be reestablished with a company on each coast, and a separate brigade platoon in Okinawa. Each company will have a habitual relationship with the Reserves. Full operational capability is expected by late summer 2004.

Marine Corps—U.S. Special Operations Command Initiatives

Today, 105 marines are filling Special Forces billets around the world. In addition to providing the current Chief of Staff to U.S. Special Operations Command (USSOCOM), the Marine Corps provides support to and ensures interoperability with Special Forces through the actions of the SOCOM-Marine Corps Board. That board met twice in 2002 and developed initiatives in the areas of Operations, Training and Education, Communications/C⁴, Information Operations, Psychological Operations, Civil Affairs, Intelligence, Aviation, Future Concepts, and Equipment and Technology. One of the initiatives, pursued in coordination with the Naval Special Warfare Command, is the Marine Corps' first sizeable contribution of forces to the Special Operations Command. Consisting of 81 marines and 5 sailors, a detachment has been organized, trained, and equipped to conduct special reconnaissance, direct action, coalition support, foreign internal defense, and other special operations missions, and will begin training at Camp Pendleton, California, in June 2003. They will subsequently transfer to the operational control of USSOCOM during October 2003, and deploy in April 2004 as augmentation to a Naval Special Warfare Squadron supporting both U.S. Pacific Command and U.S. Central Command.

Better Business Practices

We continue to seek out and use better business practices to achieve greater cost-effectiveness, improve performance, and sharpen our focus on our warfighting core competencies. In line with the competitive sourcing initiatives in the President's Management Agenda, we are increasing emphasis across our Supporting Establishment on competing our commercial activities with the private sector. We are complementing this initiative with continued development of an effective Activity-Based Costing and Management initiative across our installations. This allows us to focus

on the true cost of various functions and services and to develop benchmarks that enable us to improve performance and to focus analyses on cost-saving initiatives. This will occur both in commercial areas that we compete, and in non-commercial areas that cannot be competed. Competitions completed to date have resulted in saving millions of dollars annually and returning almost 900 marines to the operating forces. We will continue to seek additional competition candidates. Activity-Based Costing and Management initiatives provided our installation commanders with cost and performance information that enabled them to save over \$37 million last year. As we refine our databases, we expect continuing increases both in performance and cost effectiveness.

Through all of the efforts outlined above, the Marine Corps is building on today's success. As we build on our current capabilities, embrace innovation, and transform to meet the conventional and asymmetric threats to U.S. security in the 21st century, we will continue to be the Nation's Total Force in Readiness, fielding warriors whose unique seabased expeditionary and combined-arms capabilities will be critical to success in crisis and conflict. In the process of balancing our programs to meet these goals, we will focus on two primary objectives: (1) our main effort, maintaining excellence in warfighting, and (2) taking care of our marines and families.

III. TAKING CARE OF OUR OWN

Providing for the needs of our marines, their families, and our civilian marines remain among our top priorities. The most advanced aircraft, ship, or weapons system is of no value without highly-motivated and well-trained people. People and leadership remain the real foundations of the Corps' capabilities. It is important to note that the Marine Corps operates as a Total Force, including elements of both active and Reserve components. We continue to strengthen the exceptional bonds within our Total Force by further integrating the Marine Corps Reserve into ongoing operations and training.

Human Resources

End Strength

The congressionally authorized increase in Marine Corps end strength to 175,000 in response to the global war on terrorism is very much appreciated. This increase of 2,400 marines allows us to sustain the increased missions associated with the activation of the 4th Marine Expeditionary Brigade (Anti-Terrorism), enabling us to replace marines in the active units that we "borrowed" in standing up the brigade, and continue to provide the Nation with a robust, scalable force option specifically dedicated to anti-terrorism.

Recruiting

Sustaining our ranks with the highest quality young men and women is the mission of the Marine Corps Recruiting Command. Recruiting Command has consistently accomplished this mission for more than the past 7 years for enlisted recruiting and 12 years for officer recruiting. These achievements provide the momentum fueling the continuous pursuit to improve the recruiting process and enhance the quality of life for our recruiters. To continue to attract America's finest youth, Recruiting Command has provided recruiters with the best tools available to accomplish their mission. The Marine Corps supports the National Call to Service Act and continues to work closely with DOD in developing an implementation policy. We expect to commence enlisting individuals under this program commencing October 1, 2003. The Marine Corps Reserve achieved its fiscal year 2002 recruiting goals, accessing 5,904 non-prior service marines and 4,213 prior service marines. With regard to our Reserve component, our most challenging recruiting and retention issue is the ability to fill out our Selected Marine Corps Reserve units with qualified officers. The Marine Corps recruits Reserve officers almost exclusively from the ranks of those who have first served a tour as an active duty marine officer.

While this practice ensures our Selected Marine Corps Reserve unit officers have the proven experience, knowledge, and leadership abilities when we need it the most—during mobilization—it limits the recruiting pool that we can draw from to staff our units. As a result, the Selected Reserve currently has a shortage of company grade (Second Lieutenant to Captain) officers. We are exploring methods to increase the Reserve participation of company grade officers through increased recruiting efforts, increased command focus on emphasizing Reserve participation upon leaving active duty, and Reserve officer programs for qualified enlisted marines. We are also pursuing the legislative authority to provide an affiliation bonus to Reserve officers as an additional incentive for participation in the Selected Marine Corps Reserve.

Retention

Retaining the best and the brightest marines has always been a major goal of the Marine Corps. The Marine Corps is by design a youthful service, however, it is of paramount importance to retain the highest quality marines to lead our young force. History has proven that leadership in the Staff Noncommissioned Officer ranks has been the major contributor to the combat effectiveness of the Marine Corps. The Marine Corps has two retention standards. Our First Term Alignment Plan has consistently achieved its reenlistment requirements over the past 8 years. With one-third of the current fiscal year completed, we have achieved 87 percent of our first-term retention goal. A look at our Subsequent Term Alignment Plan (second tour and beyond) demonstrates that we have already retained 51 percent of our goal for this fiscal year. Both of these trends indicate healthy continuation rates in our career force.

Current officer retention is at an 18-year high, continuing the strong performance of the last 2 years. Despite this positive trend, we cannot become complacent. As a Corps, we will continue to target specific qualifications and skills through continuation pay. Military compensation that is competitive with the private sector provides the flexibility required to meet the challenge of maintaining stability in manpower planning.

Marine Corps Reserve—Partners in the Total Force

It is important to note that the Marine Corps operates as a Total Force, including elements of both active and Reserve components. We continue to strengthen the exceptional bonds within our Total Force by further integrating the Marine Corps Reserve into ongoing training and operations. Concurrent with the various initiatives underway to improve integration and update capabilities, the Marine Corps Reserve continues to support its primary mission of augmentation and reinforcement. Reserve units and marines provided over 1.8 million man-days in fiscal year 2002. Reserves provided support at all levels within the Marine Corps and at Combatant Commands and High-Level Staffs.

As we enter the 21st century, the overall structure of Marine Forces Reserve will retain the current basic structure. However, Marine Forces Reserve is currently working to create new capabilities identified as part of its comprehensive review. Both as a structural and an operational change, Marine Forces Reserve is increasing its operational ties with the warfighting commanders by improving lines of communication with our operating forces. These increased operational ties will improve interoperability, increase training opportunities, and enhance the warfighting capabilities of the Total Force.

Mobilization

Since the events of September 11, the Marine Corps judiciously activated Individual Ready Reserve (IRR) marines in response to both internal and joint operational requirements. The Marine Corps has maximized the use of individual volunteers to meet these requirements primarily in the areas of staff augmentation and force protection. In addition, selected Marine Corps units were activated for force protection requirements in support of homeland security. Because of emerging requirements associated with war on terrorism, we began involuntary recall of some of our IRRs on January 17, 2003.

Stop Loss

On January 15, 2003, the Marine Corps instituted Stop Loss across the Marine Corps to meet the emerging requirements associated with the expanding war on terrorism. Stop Loss was initiated to provide unit stability/cohesion, maintain unit readiness, meet expanded force protection requirements, and to reduce the requirement to active IRR personnel. We will continue to make judicious use of this authority and continue to discharge marines for humanitarian, physical disability, administrative, and disciplinary reasons. We have instructed our general officers to continue to use a common sense approach and have authorized them to release marines from active duty if it is in the best interest of the Marine Corps and the marine.

Education

Our leaders—especially our noncommissioned officers—throughout the entire chain of command have kept the Corps successful and victorious. Their sense of responsibility is the cornerstone of our hard-earned successes. We will continue to develop leaders who can think on their feet, act independently, and succeed. In the future, as today, leaders will continue to instill stamina and toughness in each individual while simultaneously reinforcing character that values honor, integrity, and taking care of our fellow marines—including treating each other with dignity and respect. Aggressive and informed leadership demands education, training, and men-

toring. The importance of these key elements cannot be over-emphasized, and we must attend to each at every opportunity.

Marine Corps University has responsibility and authority for the planning, coordinating, and overseeing all education for our marines. The university is accredited by the Southern Association of Colleges and Schools to confer masters' degrees and currently offers a Masters of Strategic Studies at the Marine Corps War College, and a Masters of Military Studies at the Command and Staff College. The Chairman of the Joint Chiefs of Staff currently accredits the War College, Command and Staff College, and the College of Continuing Education for Phase I Joint Education. The president of the university also exercises command authority over the Expeditionary Warfare School and the Staff Noncommissioned Officer Academies worldwide. Notable accomplishments include Department of Education approval of a Masters of Operational Studies at the School of Advanced Warfighting, which is the first step toward our third master's degree program.

Plans for the future include providing coordination and continuity through a coherent education plan for all marines. Our goal is to develop better warfighting leaders at all levels through an increased emphasis on relevant, structured education—at the graduate and undergraduate level—through both resident programs and distance education. Our intent is to greatly expand beyond the current emphasis on field-grade officers to support leadership development throughout the training and education continuum from private through general officer, and to specifically bring senior non-commissioned officers further along the education continuum.

Our lifelong learning mission is to establish an integrated approach to learning; providing marines with one destination for enrollment in a college program; access to research tools such as books, periodicals, and the Internet; basic skills enhancement; and nonresident courses. In the face of a requirement to increase tuition assistance from 75 percent to 100 percent of tuition costs, and the rate from \$187.50 per semester hour to \$250 per semester hour, the Marine Corps added the necessary funds to expand the tuition assistance program in the fiscal year 2004 POM, which provides sustainment until fiscal year 2009.

Quality of Life / Quality of Service

Congressional support for increases in the Basic Allowance for Housing, as well as the aggressive Marine Corps use of the Public Private Venture (PPV) authority provided by Congress 5 years ago, are resulting in dramatic improvements to the housing of our marines and their families. Your continued support of our budget to help us achieve zero out-of-pocket expenses by fiscal year 2005 is greatly appreciated. The condition of other infrastructure, such as our barracks, workspaces, and training ranges, are also key factors in overall quality of life. While our infrastructure budgets reflect only the minimal essential military construction and recapitalization necessary, they will allow us to achieve a recapitalization rate of 67 years within the FYDP (down from 100 years in fiscal year 1999) and an improvement of our facilities readiness by fiscal year 2013.

We have been aggressively working to reduce the number of marines and civilian marines in non-core business areas, reapplying the marines to other operational requirements, and looking to optimize the use of civil service/contractor support where appropriate. Our track record is good. For example, we have reapplied marines in the garrison food service and mobile equipment areas back to the operating forces and competed a significant number of civilian positions. We will continue this process in line with the President's Management Agenda to review 50 percent of our positions by fiscal year 2008. By ensuring that quality of service remains high, we will help maintain our successful record of recruitment and retention.

Families

The Marine Corps is an expeditionary force prepared to deploy on short notice to accomplish assigned missions. While we may recruit marines, we almost always retain families—it becomes a family decision for a marine to stay for an entire career. Because of our expeditionary culture, deployment support is provided to marines and their families as part of our normal operations, largely through the efforts of Marine Corps Community Services. In addition to concerted efforts to improve housing and family services, security and support is offered during pre-deployment, deployment, and post-deployment phases of our operations. The Marine Corps also offers numerous programs focused on new parent support and the prevention of domestic violence, as well as services and programs for infants, toddlers, children, and teens. The Exceptional Family Member Program focuses on assistance to service personnel who have a family member with special needs before, during, and after Permanent Change of Station Orders.

Safety

Ensuring a safe command climate and working environment remains a critical concern for the Marine Corps. Often, the settings and the work our marines do are dangerous, but effective command climates continually mitigate those dangers through planning and leadership. Our safety programs are integral to force protection and operational readiness. Leadership and programming in safety awareness and standards are vital to providing marines and their families with a meaningful quality of life and service. On the heels of a very successful year prior, fiscal year 2002 was a disappointing year for safety in the Corps, as we lost more marines to mishaps in fiscal year 2002 than we had in any single year for the preceding decade. Our aviation mishap rate increased as well (from 1.4 to 3.9 class A mishaps per 100,000 flight hours).

These results do not indicate a lack of desire to safeguard marines. Rather, several factors were involved that made it particularly difficult to prevent mishaps through normal operational risk management efforts. Demographically, the Marine Corps is a younger force than the other Services (by an average 6 to 8 years), with maturity being a contributing factor in many mishaps; however, none of these factors are excuses for any failure to avoid preventable mishaps. Our leadership at all levels is deeply concerned about the negative trend and we are actively involved in multiple efforts to improve readiness and save our most precious marines and valuable equipment.

IV. OUR MAIN EFFORT—EXCELLENCE IN WARFIGHTING

Marines have a vision for the future, and we are moving forward with the modernization and transformation efforts needed to make this vision a reality. We fully understand that our vision cannot be achieved independent of our sister Services. Each of the Services has its own critical role to play in providing for our Nation's collective security; however, it is important that each of our contributions be, simultaneously, both unique and complementary. In particular, the Corps stresses the importance of our key partnership with the Navy. The Navy-Marine Corps team has never been stronger, nor more necessary for our Nation.

We have stated that our first concern is with the care and stewardship of our people. This philosophy extends to the rest of our programming in that we focus on procuring the programs and equipment that will maximize the abilities of our marines to perform effectively in combat. With the foundation of requirements drawn from our emerging concepts, the Marine Corps is transforming its warfighting systems and assets throughout the elements of our Marine Forces. The following examples reflect but a few of our transformation and modernization efforts. A more comprehensive description of the Marine Corps' entire acquisition program can be found in the publication entitled Marine Corps Concepts and Programs 2003.

Training

We believe the enduring wisdom, "you train the way you fight." Because of this, our training exercises are becoming ever more joint and combined to provide our marines with the experience they will need when called upon to respond to crises—because there is no doubt that we will work alongside our sister Services and coalition partners from other nations in such circumstances. The Marine Corps Combat Training Center at Twentynine Palms, California, focuses on integrated live fire and maneuver, as well as combined arms training, and will continue to play a central role as our foremost training and testing site for Expeditionary Maneuver Warfare. Ongoing initiatives will expand the role of the Combat Training Center and transform it into a "Center of Excellence" that will focus the training efforts across our operating forces. The Combat Training Center facilitates and supports the development of new concepts and capabilities, thereby reinforcing our combat effectiveness, enhancing joint interoperability, and supporting DOD transformation efforts.

The future role of the Combat Training Center will grow beyond its current emphasis on battalion-level integrated live fire, combined arms training to support expanded training opportunities for all elements (ground, air, combat service support, and command) of Marine Air-Ground Task Forces up to and including a Marine Expeditionary Brigade. This will include: enabling multi-site, distributed training evolutions that tie together units from various bases; and investing in technology that simultaneously links live, virtual, and constructive training. Additionally, improvements to the existing Expeditionary Air Field and construction of a large-scale urban training facility are being studied as possible ways to enhance training opportunities at Twentynine Palms. All of these efforts have the potential to increase the capability of our training center to support evolving training requirements, enabling

the Corps to maintain its focus on uniquely Marine training skills, while providing a vehicle to further integrate Marine Corps capabilities into those of the Joint Force.

Infrastructure

Marine Corps infrastructure consists of 15 major bases and stations and 185 Reserve facilities in the United States and Japan. In keeping with the Corps' expeditionary nature, these installations are strategically located near air and seaports of embarkation, and are serviced by major truck routes and railheads to allow for the rapid and efficient movement of marines and materiel. Recognized as the "fifth element" of the Marine Air-Ground Task Force because of the close link to the operating forces and their operational readiness, the condition of the Corps' bases and stations is of vital importance. With the ability to train as an integrated force being a fundamental requirement of the Corps, infrastructure development planning is designed to provide the facilities, training areas, and ranges (both air and ground) to accomplish this requirement while minimizing excess and redundant capacities. With increasing encroachment pressures and constrained fiscal resources, the Marine Corps faces significant challenges to provide and maintain a lean and efficient infrastructure that fully meets changing mission demands.

Blount Island Acquisition

We are committed to undertake the wisest possible course to conserve our real property and, when necessary, to acquire any additional property that is mission critical. The Blount Island facility in Jacksonville, Florida, is a national asset that must be acquired to ensure its availability for long-term use. Blount Island's peacetime mission of supporting the Maritime Pre-positioning Force is vitally important, while its wartime capability of supporting large-scale logistics sustainment from the continental United States gives it strategic significance. The facility will play a vital role in the national military strategy as the site for maintenance operations of the Maritime Pre-positioning Force for years to come. The Marine Corps plans to acquire the Blount Island facility in two phases. Phase 1, funded in fiscal year 2000 and fiscal year 2001, is currently in progress and will acquire interests in approximately 311 acres of land for the primary purpose of ensuring public safety on parcels adjacent to the leased central management operational area. Phase 2, planned for fiscal year 2004, involves acquisition of the central maintenance operational area, consisting of over 1,000 acres.

Training at Eglin Air Force Base

With cessation of training at Vieques, Puerto Rico, the established training ranges, quality of training support, and proximity to the ocean available at Eglin Air Force Base, Florida, can provide Naval Expeditionary Forces with an alternative training capability. Eglin's capabilities, location, and tenant commands provide the opportunity to facilitate joint training between Air Force, Navy, Marine Corps, Army, and Special Operations Forces. Development of an expeditionary force training capability at Eglin can support the Secretary of Defense's vision and direction for training transformation and the development of a Joint National Training Capability. This type of training will be critical to naval expeditionary combat-readiness.

The Marine Corps proposes to execute two 10-day training exercises with a Marine Expeditionary Unit at Eglin each year. These exercises include a variety of scenarios such as amphibious landings, raids, mechanized operations, helicopter operations, and live fire and maneuver exercises. No final decision on training activities will be made until an environmental assessment currently underway is completed. The Navy and Marine Corps are actively working to develop and sustain cooperative relationships with the local community and the State of Florida.

Encroachment and Environmental Issues

Encroachment—defined as any deliberative action that can cause the loss of, or restrict, the use of land, airspace, frequency, or sea maneuver areas—is a serious threat to the operational readiness of the Corps. Urban and residential areas now surround many Marine installations that were originally remotely situated. This growth is often accompanied by pressure for access to Marine Corps resources, or demands to curtail Marine Corps operations to make them more compatible with surrounding land uses. The Corps' training lands often provide excellent habitat for threatened and endangered species, serving as islands of biodiversity amid the crush of densely populated urban areas that surround many of our installations. The Marine Corps is proactively engaged with Federal, State, and local agencies and governments, as well as nongovernmental organizations, to provide win-win solutions to these encroachment pressures, and ensure compatible land usage and environmental security without degrading training and mission readiness. Unimpeded

access to our installations and ranges is critical to the Marine Corps remaining America's "Force in Readiness."

Our Nation has crafted a strong environmental code of conduct structured on a wide range of Federal, State, and local laws and regulations. Vague or inflexible environmental requirements, however, can present significant challenges for marines performing their primary mission. We support ongoing efforts to seek clarity and limited flexibility in certain environmental laws, so that we may more effectively balance our training requirements with our long-term environmental stewardship responsibilities. Our ultimate goal is to "fight the way we train," while preserving the natural environment. Today, marines at all levels perform their jobs with an increased awareness of potential environmental impacts. All of our bases and stations, for example, have implemented Integrated Natural Resource Management Plans and aggressive pollution prevention programs. The hard work does not end with these initiatives. The impact of encroachment on the Corps' ability to fully utilize its installations are varied and require constant vigilance and attention to ensure that operational readiness is not diminished.

Command and Control

Interoperability is the key to improving naval expeditionary command and control effectiveness, especially as we begin to integrate battlespace sensors residing in our manned and unmanned aerial, space, and ground vehicles. This is particularly true as the Marine Corps continues to work routinely with a range of government, non-government, and international agencies. The command, control, communication, and computer (C⁴) end-to-end interoperability of the Global Information Grid will serve to enhance our ability to conduct joint, multi-department, and multi-agency operations through the use of technology, standards, architectures, and tools.

The Marine Corps works closely with the Joint Staff, combatant commanders, operating forces, and other Services to ensure that, where possible, joint concepts of operations are developed for common capabilities. An example of this process is occurring with the development of the Joint Tactical Radio System, which combines numerous single function programs of current inventories into a single, interoperable, joint radio program that will provide secure digital communications while enhancing wideband tactical networking.

Intelligence

Our fiscal year 1996 through fiscal year 2003 enhancements to Marine Intelligence Support are paying off during Operation Enduring Freedom and the global war on terrorism. Intelligence support organic to Marine Forces combined with capabilities from our Marine Corps Intelligence Activity in Quantico, Virginia, to provide federated production (reachback) support has been validated through current operations. Marine Expeditionary Unit's forward deployed with organic all-source intelligence collection and production capabilities provide current intelligence support to Marine and Special Operations units. Our deployed signals intelligence, human intelligence, ground sensor, and reconnaissance teams provide the commander current situational awareness. All-source intelligence marines have the systems and training to integrate organic collection, network with the joint force on the ground, and effectively reach back to the Marine Corps Intelligence Activity and joint centers at secure locations.

Mobility

While the global war on terrorism has demonstrated the current capabilities of the Navy-Marine Corps team, our continuous transformation and modernization efforts hold even greater potential for increasing naval power projection capabilities in the future. Many of these efforts focus on increased speed, range, payload, and flexibility of maneuver units—mobility. This concept includes a vision of an all-vertical lift Air Combat Element, with the introduction of tiltrotor and short-take-off/vertical-landing (STOVL) aircraft. The following initiatives are some of the keys to the achievement of Marine Corps operational mobility objectives:

MV-22 Osprey

The MV-22 remains the Marine Corps' number one aviation acquisition priority. While fulfilling the critical Marine Corps medium lift requirement, the MV-22's increased capabilities of range, speed, payload, and survivability will generate truly transformational tactical and operational opportunities. With the Osprey, Marine Forces operating from the sea base will be able to take the best of long-range maneuver and strategic surprise, and join it with the best of the sustainable forcible-entry capability. Ospreys will replace our aging fleets of CH-46E Sea Knight and CH-53D Sea Stallion helicopters.

KC-130J

The KC-130J will bring increased capability and mission flexibility to the planning table with its satellite communications system, survivability, and enhancements in aircraft systems, night systems, and rapid ground refueling. The KC-130J is procured as a commercial off-the-shelf aircraft that is currently in production. We are pursuing a multiyear program for purchase with the U.S. Air Force.

Advanced Amphibious Assault Vehicle

The Advanced Amphibious Assault Vehicle (AAAV) is the Marine Corps' only Acquisition Category 1D program and will be one of the principal enablers of the Expeditionary Maneuver Warfare concept. AAAV will provide never before realized high-speed land and water maneuver, a highly lethal day/night fighting ability, and advanced armor and Nuclear-Biological-Chemical protection. This—coupled with a systematic integration into emerging service and Joint Command and Control networked information, communications, and intelligence architectures—will provide the Marine Corps with increased operational tempo, survivability, and lethality across the spectrum of operations.

Maritime Pre-positioning Force

The Maritime Pre-positioning Force (Future) will be the true enabler of primarily sea-based operations. When it becomes operational, the future Maritime Pre-positioning Force role will expand beyond that of today, and will provide a true seabasing capability. In this regard, it will serve four functions that the current capability cannot: (1) phased at-sea arrival and assembly of units; (2) selective offload of equipment and cargo; (3) long-term, sea-based sustainment of the landing force; and (4) at-sea reconstitution and redeployment of the force. The naval services are exploring several new technology areas during the development of Maritime Pre-positioning Force (Future). Currently, the Maritime Pre-positioning Force (Future) Program is conducting an analysis of alternatives to inform an acquisition decision by the Office of the Secretary of Defense.

High-Speed Vessel (HSV)

High-speed vessels will enhance the Marine Corps' capability to perform a wide range of missions, from providing support to a theater security cooperation plan to sustaining long-term operations ashore. High-speed vessels can enhance our ability to conduct sea-based operations and use the sea as maneuver space. HSVs do not have the loitering and forcible entry capabilities of amphibious ships or the pre-positioning capacity of our Maritime Pre-positioned Force Squadrons. However, their shallow draft, high speed, maneuverability, and open architecture make them a valuable link in a seamless logistics system that extends from source of supply to the Sea Base and the Joint Force, enabling a faster, more responsive, and capable deployment of a range of force modules from forward-based “hubs” such as Okinawa, or from the United States. The Marine Corps is currently testing and validating these concepts by employing a high-speed vessel in the Pacific theater as a form of strategic lift.

Power Projection Platforms

Combined with embarked marines, naval expeditionary warships provide the Nation with forward-presence and flexible crisis response forces. They also provide a truly unparalleled expeditionary forcible-entry capability. As part of a joint effort, the Marine Corps will remain capable of getting to the fight rapidly in order to decisively deter or defeat adversaries who try to impose their will on our country or its allies. A fiscally constrained programmatic goal of 12 Amphibious Ready Groups—one that deliberately accepts increased operational risk by attempting to balance force structure with available resources—does not change the warfighting requirement to lift the Assault Echelons of three Marine Expeditionary Brigades via future platforms for amphibious shipping. The Marine Corps supports the LPD-17 and a modified LHD-8 (“Plug Plus”) ship design in fiscal year 2007 and will evaluate the adequacy of the R&D and shipbuilding and conversion (SCN) funding for the development of future LHA(R) ships for the remainder of the class.

Mine Countermeasure Capabilities

Naval expeditionary forces require an effective counter-mine warfare capability to open and maintain sea lines of communication and to operate within the littoral battle space. This is probably our greatest concern when it comes to projecting power in an anti-access environment. With respect to mine countermeasures, we require a family of capabilities that encompasses mine detection, location, neutralization, marking, and data dissemination. Designed to provide an organic mine countermeasures capability within operationally acceptable timelines and with acceptable

levels of operational risk, this next generation of systems includes the Advanced Mine Detector, the Assault Breacher Vehicle, the Remote Minehunting System, and the Long-term Mine Reconnaissance System. Our most critical mine countermeasures deficiencies exist in the area near the shoreline through the high water mark and beyond, where detection and neutralization capabilities are extremely limited. Given the broad proliferation of known and unknown mined areas throughout the world, we must improve our ability to operate in this exceptionally lethal environment. Our intent is to leverage America's strength in technology to dramatically improve our ability to locate and avoid or neutralize mines and obstacles as necessary, and eventually remove the man from the minefield.

Fires and Effects

With the increased range and speed of expeditionary mobility assets, the landward area of influence of naval forces has increased by an order of magnitude. Consequently, the Nation requires weapon systems with correspondingly greater range, lethality, flexibility, and tactical mobility. A range of lethal and non-lethal fire-support programs is moving the Corps in that direction. The development and acquisition of non-lethal weapons systems will expand the number of options available to commanders confronted with situations in which the use of deadly force is inappropriate. The Marine Corps is developing a robust non-lethal capability that will address the non-lethal core requirements of clearing facilities, crowd control, and area denial. Additionally, we are enhancing the capabilities with which we can affect our adversaries that defy the traditional concept of weapons and fire-support means. Technical advances in directed-energy weapons hold much promise for future capabilities in this area.

Joint Strike Fighter

The Joint Strike Fighter (JSF) is the next-generation strikefighter for the Marine Corps, Air Force, and Navy and will replace the Marine Corps' AV-8B and F/A-18A/C/Ds. The JSF family of aircraft will include a STOVL variant, a conventional take-off and landing (CTOL) variant, and an aircraft carrier-capable variant. Commonality between the variants will reduce both development and life cycle costs and will result in significant savings when compared to the development of three separate aircraft. The Marine Corps requires that its STOVL variant be able to operate from large-deck amphibious ships, austere sites, and forward operating bases. The STOVL Joint Strike Fighter version can use from three to five times more airfields around the world than our existing conventional take-off and landing aircraft. Moreover, because the STOVL variant can operate from both conventional carriers and amphibious assault ship decks, it thereby effectively doubles the number of platforms available for seabased operations. The advantages of a stealthy STOVL strike fighter—capable of taking off from an expeditionary base on land or at sea, flying at supersonic cruise, accomplishing its mission with advanced sensors and weapons, and then returning to its expeditionary site—are dramatic. The STOVL Joint Strike Fighter will provide the reliability, survivability, and lethality that marines will need in the years ahead, and transform the very foundations of naval tactical air power for the 21st century.

Naval Surface Fire Support

Our ability to provide fires in support of expeditionary forces operations beyond the beach has not kept pace with the dramatic increases in mobility. Critical deficiencies currently exist in the capability of the Navy to provide all-weather, accurate, lethal, and responsive fire support throughout the depth of the littoral in support of expeditionary operations. The Marine Corps supports the Navy's near-term efforts to develop an enhanced naval surface fire support capability with the fielding of the 5"/62-caliber naval gun and the development of extended-range munitions. In the far-term, the Marine Corps supports the development and fielding of the Advanced Destroyer (DD(X)), armed with 155mm Advanced Gun Systems and Land Attack Missiles, to fully meet our naval surface fire support requirements. Our Nation's expeditionary forces ashore will remain at considerable risk for want of suitable sea-based fire support until DD(X) joins the fleet in significant numbers.

Indirect Fire-Support

A triad of indirect fire-support programs will provide needed firepower enhancements for marines in the near- to mid-term. The first element of the triad is the Lightweight-155mm (LW-155) towed howitzer needed to replace our current M-198 howitzer, which is at the end of its service life. The LW-155 is a joint Marine Corps-Army effort that will meet or exceed all the requirements of the current system while significantly reducing its weight.

The second element, the High Mobility Artillery Rocket System (HIMARS), will deliver very high volumes of rocket artillery in support of the ground scheme of maneuver. The HIMARS will provide accurate, responsive general support, and general support, reinforcing indirect fires at long range, under all weather conditions, and throughout all phases of combat operations ashore. It will fire both precision and area munitions to a maximum range of 36 miles.

The Expeditionary Fire Support System, the third system of the land-based fire support triad, will accompany marines in any expeditionary mode of operation. It will be the primary indirect fire-support system for the vertical assault element of the ship-to-objective maneuver force. The Expeditionary Fire Support System, as a system, will be internally transportable by helicopter or tiltrotor aircraft to allow the greatest range and flexibility of employment for our future operations.

Information Operations

Defense planners are engaged in studies exploring Information Operations as a core military competency, fully integrated into both deliberate and crisis action planning. The Marine Corps intends to enhance our operational capability in both offensive and defensive Information Operations. Marine Corps doctrine and warfighting publications are being reviewed and revised to acknowledge Information Operations as a core warfighting capability fundamental to all operations spanning the spectrum of conflict with equal significance during non-combatant and humanitarian operations. We recognize a requirement to develop and train an Information Operations career force of trained professionals from the ground up in support of joint and interagency efforts.

New Weapons Technologies

The Corps is particularly interested in adapting truly transformational weapon technologies. We have forged partnerships throughout the Department of Defense, other agencies, and with industry over the past several years in an effort to develop and adapt the most hopeful areas of science and technology. Several notable programs with promising technologies include: (1) advanced tactical lasers, (2) high-power microwave, non-lethal active denial systems, (3) free electron lasers, (4) electromagnetic guns (rail guns), and (5) common modular missiles for aircraft.

Logistics and Combat Service Support

The Marine Corps logistics' vision is to significantly enhance the expeditionary and joint warfighting capabilities of our Operating Forces. Key warfighting capabilities encompassed in our future concepts—Enhanced Networked Seabasing and Ship-To-Objective-Maneuver—will be defined by our logistic capabilities and limitations. Hence, we are committed to exploring and implementing actions to increase combat power, operational versatility, and deployability. The concept of focused logistics in Joint Vision 2020 is guiding the Marine Corps as we strive to increase the sustained forward-deployed capability of our forces. Future force combat service support—and the Marine Corps logistics that enables it—will be changing as we shift more of our operations to the sea base. At the forefront of this effort is the Marine Corps Logistics Campaign Plan that outlines essential objectives and tasks based upon overarching Marine Corps, naval, joint, and DOD concepts and guidance. Our strategy encompasses four pillars:

Logistics Information Fusion and C2

A key to current and emerging warfighting capabilities is a robust and responsive logistics information technology capability—one that is integrated with our command-and-control architecture and interoperable with naval and joint systems. The Global Combat Support System—Marine Corps (GCSS-MC) and shared data environment, along with the Common Logistics Command and Control System, provide logisticians across the Marine Corps with a set of common logistics assessment, planning, and execution tools that are interoperable with the common operating picture.

Seamless Distribution

The single capability that defines Marine Forces in a joint environment is its ability to sustain itself over an extended period of time. The principal goal is to move from defining sustainment in terms of deployable “days of supply” to a continuous uninterrupted sustainment capability for the force. A key element in achieving this is integrating current distribution processes and systems into broader naval and joint distribution processes. Achieving this capability will not only greatly enhance naval operations, but will be transferable to the task of sustaining joint forces and operations.

Enhanced Equipment Readiness

The bulk of our logistics effort and associated “footprint” is driven by its equipment-support activities. The Marine Corps seeks to reduce the required level of support for equipment by greatly improving the reliability, availability, and maintainability of ground tactical equipment.

Enterprise Integration

Achieving the emerging warfighting capabilities envisioned by future concepts require dynamic shifts in our logistics processes and organizations. Leading this effort toward logistics modernization is true enterprise integration consisting of GCSS-MC, process reengineering, and organizational reform.

V. CONCLUSION

The major challenges confronting the Marine Corps today center on organizing, training, and equipping our force to better support Joint Force Commanders, now and in the future. The modernization programs and the transformational systems that we are pursuing are key to our ability to meet the Nation's wartime, crisis, and peacetime requirements. We have put into place well-conceived programs addressing the needs of our marines and their families, the requirement to enhance the current readiness of legacy systems, the critical role infrastructure plays in present and future readiness, and the balance between modernization and transformation.

We are focusing on the development of integrated capabilities that, when combined with those of our sister Services and Special Operations Forces, will effectively meet the challenges of an increasingly varied and threatening national security landscape. You can remain justifiably proud of what your Marine Corps contributes as America's forward engagement and expeditionary combined-arms force. We are grateful for the unwavering support you provide in this vitally important work.

Senator TALENT. Thank you, General.

We have a vote at 3:45, and I want to make sure the subcommittee members have a chance to ask questions. I am only going to ask one right up front and then defer to Senator Kennedy.

Admiral, I want to thank you for your personal kindnesses to me in giving me that really good brief, which took me by the hand a little bit, not only a new chairman but a new Senator. Your vision is intriguing and powerful. As you mentioned, it depends a lot on the Littoral Combat Ships, which as I understand there are two parts to that. One is the ship or the frame, and then the focus on mission modules. As I look at the requirements documents that the Navy has developed so far, it seems to me that you are pretty far along in defining what you want with the ship and its frame.

I am concerned about whether you are equally as far along in defining the requirements for the modules. I think we know what we want them to do and it makes a lot of sense with anti-submarine warfare and littoral combat. Do you share that concern? Are you where you want to be in terms of developing the requirements for that module, and are you where you want to be in terms of the technical sophistication of it at this point?

Admiral CLARK. Mr. Chairman, where I would like to be is that I would like to be at the end of a 3-year or a 4-year development process, but I am only a year or less into it.

Senator TALENT. Are you where you hoped to be at this point? Put it that way.

Admiral CLARK. So what I would say is that I am very pleased with the fact that I am sitting here and we are discussing a program that we did not submit in the fiscal year 2003 request. It was clear to me that in dealing with the world that we were living in, the LCS platform and its family of ships has a capability we need tomorrow.

I will tell you that I am extraordinarily pleased with the progress that we have made. If I had known what I know today when we worked on this budget and developed it, I would have put it together differently. But I did not know enough yet. When Secretary Young comes in panel two to talk to you about the things that we have done to bring, to move LCS along, I want to say that LCS represents a reform in the acquisition process, the spiral development process.

Here is where I am with LCS. We envision Block Zero fundamentally the modules being off-the-shelf existing capabilities that we have today. If I had known what I know today when I was building this budget and submitted it, I would have had more money in the R&D side of this, but I could not justify it as we were making the submissions. I did not have enough knowledge.

I do believe that we are absolutely going at this in the correct way.

Senator TALENT. Is that the reason the \$35 million in production money is part of your unfunded priorities?

Admiral CLARK. That is correct. Fundamentally, I need these ships to deal with what I believe to be the threat that we face in the world where we are operating today and the kind of threat that is going to come after us in the first decade or two decades of the 21st century, where no navy is going to go toe-to-toe with the Navy of the United States of America. They are going to come after us asymmetrically, and we have to be able to deal with these threats in the near-land arena.

What I am excited about, though, is the issue you raised. This is a sea frame. We are going after the design of this in a revolutionary way. I and my successors will not have to come to Congress years from now for a mid-life upgrade because this approach to ship ownership is going to allow continuous upgrades.

It is the way to develop and create the combat capability. I am excited about it.

Senator TALENT. You are saying the whole concept here is that the nature of the modules would be such that even if you develop the frame ahead of where you develop the module, the frame should be able to accommodate whatever you decide to do with the module?

Admiral CLARK. That is absolutely correct, and I believe that the basic frame has to have fundamental capabilities. It must have self-defense capabilities. We ought to be able to shoot down missiles, and we have to be able to deal with the surface threat. But fundamentally, we have defined what the mission is for this ship. General Hagee mentioned them. They are areas that this subcommittee is very interested in.

I believe this is the most significant advance we have seen in years is the wet end of mine warfare. I believe that by enabling us to go and create the design from the keel up, the ability to go after unmanned vehicles in mine warfare and the whole undersea warfare area, anti-submarine warfare, in the near-land arena, the future is going to absolutely revolutionize the way this whole area of warfare is conducted.

The first step is we have to have the frame as rapidly as possible because we have real world threats in the terrorist environment

that we live in today. We need these capabilities with things that we can put on them today, existing off-the-shelf capability. We need that as rapidly as we can turn the product.

Senator TALENT. Thank you, Admiral.

Senator Kennedy.

Senator KENNEDY. Just continuing along on the LCS modules, I understand that the Navy had planned to install the remote mine hunting systems on 17 DDG-51 destroyers. Now they are focused on the LCS. They have cut the number to six systems for the DDGs. The previous plan would give mine countermeasures capability to the fleet sooner.

I am looking at that against the background of what we have seen with the HMS Galahad coming on into port over there with the presence of mines. It seems to me that we are going to be needing this capability. You have the capability. It was all set to sort of go. Now we are going to be delayed for a period of time, and we are just illustrated in these littoral situations in the past days about the importance of that capability.

Admiral CLARK. Senator, here is the way we go at this. Frankly, the recommendation was made to me said: Boss, we are going to do this in LCS; should we proceed with the organic commitment that we had made before? I said, "Absolutely, we are going to continue with the commitment for organic mine warfare, because we have more development to do here."

But, Senator, what I believe is this: an LCS ought to have four or five of the RMSs on it. That is what I think it should have. So as we put together the program for the next year, this will have more definition next year. But one RMS is not enough. I envision we will be tailoring these individual platforms, and I will tell you that I absolutely see the RMS program growing.

Senator KENNEDY. Mr. Chairman, we are going to be voting at 3:45 and there are three of us here. So if we get 7 or 8 minutes, is that okay?

Senator TALENT. Whatever we need.

Senator KENNEDY. We want to be fair. We will try and get it within 8 minutes.

Let me ask you this. Why did it take as long—I do not know if the general can tell—for the HMS Galahad to get into port? It seemed that it was coming into port and it was outside and coming into port, and it seemed to take about 3 days to get on into that area with all of the relief. I know what the problems are once it got there, but what was that problem and the problems with unloading. But what was really the problem? Was it removing the mines?

General HAGEE. Actually, it was not removing the mines. In fact, I would like to say a couple of words about the mines.

Senator KENNEDY. Good.

General HAGEE. There is a complementary way to attack mines and that is what we did in Kuwait.

Senator KENNEDY. This is not when you were using the choppers and the chains? I saw them doing that clearing the Gulf before out there.

General HAGEE. No, sir.

Senator KENNEDY. One of the great sights, seeing these helicopters carrying those chains and the American fleet going after.

General HAGEE. This goes back to the idea of Sea Basing and speed, sir. When it looked like the Iraqis were going to ignite some of the air fields, we launched the attack. Not only did we take down the southern oil fields, we also took down the Al Faw Peninsula and Umm Qasr. Because it was so fast, what our forces did is we actually captured three barges with mines on the barges that they were getting ready to lay—that they never laid.

Therefore, we actually got the HMS Galahad in much faster than otherwise. Now, the day that she was supposed to leave, we actually found a mine, and so we wanted to ensure that the harbor was completely clear of mines and that is why there was that slight delay.

Senator KENNEDY. Okay. That is helpful, but that capability and capacity, if they had not gotten the three barges of mines out there, it might have been different.

Let me come back to the fleet size. We talked—Admiral Clark, I appreciated the chance to visit with you—about the retiring of the DD-963 destroyers early. We know that they have been providing the Tomahawk missiles for the strike missions and I think you mentioned that there were alternative ways of providing that capability.

So I looked into that, and of course you mentioned, I think, the Aegis cruisers and the destroyers, which have 120 cells for the cruisers and 90 cells for the destroyers. But most of those are the surface to air rather than the Tomahawk missiles that were being used into this. So let me come back again to this question. Given the need for this capability, should we not be holding onto those?

Then second, given the fact of the overall reduction in terms of the number of ships is going to mean more people on the ships, I guess, the additional OPTEMPO in terms of people going out because you have smaller numbers of ships and so they will have to be on base for a longer period of time. You have obviously worked that through or thought about that. How much pressure is that going to present to the Navy? Obviously, the personnel will be willing to do it, but what is your assessment over a period of time?

Admiral CLARK. My assessment is, Senator, that I have reviewed very carefully the inherent warfighting capability and the risks associated with the retirement of this platform. My view is, and I think the numbers show, we have significant capacity in the vertical launch system (VLS) and we are also, part of this budget is the creation of SSGNs, which handle over 150 Tomahawks apiece. So we do not have a shortage of potential missile tubes.

When I evaluated this whole laydown, it became clear to me that it was time to cut this asset loose so we could use those resources to reinvest in the future. It is a tough choice, but in an open hearing I do not want to get into the specifics of why, but I would be glad to submit those for the record if you would like.

But I want to assure you that I have assessed this and I believe that the risk is absolutely acceptable.

With regard to tempo, it becomes a driver for force structure. Again, it gets into a classified discussion very quickly to talk about each platform and the piece that they bring to the challenge.

But Senator, here is the issue with the legislation that was passed last year. The limitation on 116 combatants and then the requirement for me to maintain those ships ready to be recommissioned and remanned is an expense that I do not believe the taxpayers' money needs to be spent on. I believe that unless there is a decision made not to allow us to proceed with these decommissionings, we need to alter the legislation and I need your support. If we are going to take this step, we need to take the entire step.

Senator KENNEDY. Let us come back to that and talk with you about it. Just in the last bit of time that I have, looking at the tradeoffs in firepower on the DD(X), my understanding of the effort leading to the point on the DD(X) schedule, including all of the analysis done supporting the DDG, indicated there were certain threshold capabilities for the two parameters. One, the question about the first design being too big. Evidently 15,000 tons was too big. The question is whether the next platform is going to be too small to be able to provide the fire support that is going to be necessary, given the fact of the deficiencies we have today and given the fact that that extended range, the ERGM, has also been delayed.

What are we getting ourselves into?

Admiral CLARK. Senator, those decisions will be made by the acquisition executive, not by the CNO, and he is going to be in panel two. Having said that, I will tell you that the breakthrough in DD(X) is the development of the AGS, a system that has the potential to fire out to 100 miles. I mean, it is unbelievable when I think about it, the way it was when I started my career with a 16,000 yard weapon.

You look at Tomahawk, which will be on that platform. You look at the potential for ERGM and ANSR, those two systems that are competing with one another. The real breakthrough here is going to be volume of fire and precision of fire from a surface platform in support of the United States Marine Corps.

A science and technology (S&T) project on the affordable missile has potential for future use. Because this is going to be an all-electric ship, it has all the potentials that come with the potential of rail gun technology. I believe that what we see is an extraordinary bright future here. All of these things involve research and development, but all of these are well within our grasp and the programs are progressing nicely here and the Secretary for Research, Development, and Acquisition will be able to address more specifics if you would like.

Senator KENNEDY. My time is up. Thank you.

Senator TALENT. Thank you, Senator.

Senator Collins is next.

Senator COLLINS. Thank you, Mr. Chairman.

Admiral Clark, I want to again reiterate my thanks to you for your good work in putting together the budget request for this year, and in particular for funding shipbuilding at a level that will help to remedy some of the deficiencies of the past and put the Navy on the road to recapitalization. There are, however, still challenges that face us.

In particular, I have concerns about the procurement of the major surface combatants in the coming years. As I understand it, the Navy will cease construction of the DDG-51 destroyers after 2005 and only fund four DD(X) destroyers during the 2006 to 2008 time frame. As you are well aware, to sustain the industrial base four vessels over a 3-year period just does not make it. It really is totally inadequate.

At the same time, I think a lesson that we have learned from the last couple of years is the Navy is going to continue to face increased mission requirements. The problem is still a few years off and I realize that, but I think it is critical that we start talking about it now. What are your thoughts on addressing that gap to make sure that we are sustaining the industrial base as we transition from the DDG to the DD(X)?

Admiral CLARK. I believe Secretary Young has done a magnificent job of working the industrial base issues and the partnerships that have occurred with the ship swap concept and has made it a reality, and the support of Congress made those moves possible. I think these are all things that are out in front of us.

There are some unknowns, Senator. The first unknown is with the advent of missile defense do we have our numbers right? How quickly will CG(X) come on line? What will be the impact on this for the DDG, the whole numbers of DDGs, and the cruisers that we have?

I will tell you that some of those are unknown at the present time and we are going to have to continue to review those. I feel good about where we are in the 2004 line. There is no doubt about the fact that we are going to have to continue to work that, and a major focus as we are working the 2005 submit now as we are up here talking about 2004. These are important issues that we are having to address as we put together the next cycle.

Having said that, it is my conviction that clearly the industrial base is a critical issue for the United States Navy. What makes our future possible is the industrial base. So these numbers in the transition between DDGs and DD(X) have to be managed very carefully. So the best answer I can give you is a pledge that that will be done from a standpoint of where my role in the process in stating the requirements, as opposed to the acquisition executive, making the case for a healthy industrial base.

With regard to the outyears, this is the third year that I have come and talked to you about the issue of the importance of an investment stream that is leveled so that we create better partnerships with industry. One of the things that I am very proud of in this submission is that you can see that the leadership in the Navy Department reaching toward and for the goals that we have talked about now. For the third year, we need to reach the point where we have at least \$12 billion in new ship construction so that we can have the kind of Navy that we are dreaming about.

What I am really pleased with is that you see a progression and a growth. The growth in this year is not hypothetical. It is real. It is not where I want to be yet. We have not reached the objective, but we are reaching toward that objective in a constructive way. When we have that level investment stream, we will be able to partner more effectively with industry so that sizing and maintain-

ing the industrial base is going to be a much more productive effort.

Senator COLLINS. Thank you, Admiral.

We have talked often that, given the rapidly declining size of the fleet, that it is critical that the Navy take every opportunity to maximize the life of vessels that can still provide useful service. Your unfunded priority list includes funds to or requests for funds that would provide for the refueling of the SSN-699, the U.S.S. *Jacksonville*. In the past, some people have suggested that the Navy perhaps has been too quick to decommission submarines and that has contributed to the decreased force structure that we have today.

What value would the U.S.S. *Jacksonville* bring to the Navy should funding be made available by this subcommittee so that it could be refueled as opposed to decommissioned?

Admiral CLARK. This falls, Senator, in the category of talking about the tough decisions that a person has to make. There are several categories where I had to make judgments like this. The recommendation to decommission the Baseline 1 cruisers was totally and completely an affordability issue. The decision to not refuel all of the submarines was an affordability issue.

But this issue and this decision was driven in part by the decision also to invest \$4 billion in the reconfiguration of the Trident submarines and creating SSGNs. So if you go back and look at this over time, when I got this job there were five submarines that were not in the program to be refueled. So we have reached out and we have pulled some of those into the category that they are now in program for engineering-refueling overhauls.

So we have made the point about total numbers. I have stated often, and before the whole committee you asked me if I still believed in 375, and I do believe that that is the right objective to reach toward. I am a great believer that capability in individual platforms is even more important than numbers, but numbers has this quality all of its own. It defines the places that you are going to be able to be.

So Senator, the bottom line is those decisions were made because of affordability reasons. I do not have the resources to retain those ships or to refuel those submarines.

Senator COLLINS. Finally, Admiral Clark, I am going to ask you for the record—since I know we want to give our colleague from Rhode Island a chance to get his questions in before the vote—information on the increasing role of the Navy in missile defense. I am very interested in the comments you have made both orally and in your written testimony and I would like to explore that with you in a written exchange.

Thank you, Mr. Chairman.

[The information referred to follows:]

We are working cooperatively with the Missile Defense Agency (MDA) to evolve Navy's participation in ballistic missile defense (BMD). The plan to install surveillance and track capability in several DDGs by October 1, 2004, is the first operational effort toward this cooperation. We are working with MDA to improve on these capabilities through a spiral development plan culminating in a capability to provide anti-air warfare and BMD capability in Aegis-equipped ships in the 2010+ timeframe. Currently, that effort is aimed at in-service ships, but we are also look-

ing at options that have the potential for applications in new construction ships in the future.

Senator TALENT. I thank the Senator from Maine.

The Senator from Rhode Island is recognized.

Senator REED. Thank you, Mr. Chairman.

Thank you, gentlemen, for your testimony and for your service to the Nation. We appreciate both.

Both the fleet and the Corps is stretched awfully thin at the moment and I just wonder, can you let me and the subcommittee know in terms of equipment, because I think the personnel will do whatever they are told to do, what is the constraining items that you are finding in this deployment and this operation? Is the constraint in numbers or design, technology, and obsolescence? Admiral Clark?

Admiral CLARK. At the top of the list comes precision ordnance. Of course, the issue with Tomahawk is documented. We look toward going to full-scale production in 2004, the acquisition executive, Secretary Young, perhaps would want to address this, but I would just say this about it. The goal, especially given now what has gone on in the last couple of weeks—and without getting into specific numbers, which you would not want me to do because we get into classified issues right away—to get more Tomahawks.

The way the program is designed today, we do not get to full capacity until fiscal year 2005, and I do believe there are things that could be done to remedy that situation and that they ought to be looked at very carefully. So that even though we are not at full-scale and we have not gone to production yet, we could make the investment that when we are ready to go to production we get to capacity much earlier in the period.

I would say with regard to the rest of the precision munitions issues, fundamentally the Nation has made the investments as part of the DERF last year and we are in pretty good shape. We are reaching toward capacity.

I will tell you there is one area that I have learned in Afghanistan and I have learned here. Boy, I want the Joint Strike Fighter (JSF) as fast as I can get it. I am so pleased with the way F/A-18E/F is going. This is the first deployment for the F/A-18E/F. The combat range of this airplane, 40 to 50 percent more combat range, major issue; and the ability to get to the target area and the drain on the refueling resources, because when you have a big operation and large refueling requirements. If I had JSF, I could get to the target area without ever bothering them.

What I have learned from this is the investment that we have in JSF in this budget is, boy, an incredibly wise thing to do. What I have said before, I desperately want the operational availability that is present in this aircraft.

What else I have learned is how desperately I want the combat range that is in this aircraft.

Senator REED. Can you comment here on the decision to suspend launches over Saudi Arabia and other countries of the Tomahawk?

Admiral CLARK. I certainly could.

Senator REED. What is the problem there? Let me put it that way, if you can comment.

Admiral CLARK. Let me just tell you that no combat system in the world is a 100-percent system. I will tell you that this system is operating, with the data that I have today, better than our historic averages.

With regard to the capability that it has, I can say this: that if this system gets lost, it will set down. We had a failure in a component in a couple of these systems where that happened. That is about what I can say about it. But the performance has been improved over previous operations and previous numbers.

Senator REED. Thank you.

General Hagee, from the perspective of the Corps?

General HAGEE. Sir, I would like to associate myself with Admiral Clark's comments on legacy systems. I, too, would like to see the Joint Strike Fighter here. We are flying our assault helicopter, the CH-46. I am ashamed to say that some of those helicopters that are flying in Iraq I flew in Vietnam, and that was a long time ago. So, we need the Osprey.

But if you set those legacy systems aside, because of the funding that both Admiral Clark and I talked about in our opening statement that Congress has given us over the past couple of years, we are ready to fight today, as you are seeing on television. My short-term concern is when this war is over, we have to reconstitute, and we have been using our equipment and some of the legacy equipment. We have been using it hard and it is going to have to be maintained; some of it is going to have to be replaced.

So that is really a larger concern to me than the current fight.

Senator REED. In effect what you are saying is that you will have the perennial tradeoff between reconstituting your legacy systems and modernization, and it will be even worse after it has been used so aggressively; is that fair?

General HAGEE. That is correct, sir. But facing reality, we know that we are going to have to maintain some of these legacy systems until the new ones come on.

Admiral CLARK. May I just comment further? I believe that that shows the importance of some of the investments that are in this budget. For example, the EA-18G, a new program to replace EA-6B, is I think vital because of the point you just made.

Can I also add something about Tomahawk?

Senator REED. Yes, sir.

Admiral CLARK. The Tomahawk question you raised has been said, but let me reiterate. Precision is of utmost importance, and we are doing everything we can in the way we conduct this operation to make sure that we minimize the potential for collateral damage. I would like to say with this system, that does not involve just the end point. We have meticulously planned these routes so that we could do everything that we know how to do to ensure that if there was a problem with the system as it was conducting its path in to the target, that it would minimize any collateral damage, and so far that has been very successful.

Senator REED. Just a follow-up question. Does this budget reflect those refurbishment costs that you already anticipate?

General HAGEE. No, sir, it does not.

Admiral CLARK. There was no way for us to know about that in that submission. Frankly, I do not know how to even calculate it right now, to tell you the truth.

Senator REED. But I suspect, given the pace of activities and the extent of activities, that is going to be a sizable number.

Admiral CLARK. I have several teams working the whole issue of reconstitution and I am working various options, because I do not know when I will be able to start.

Senator REED. Mr. Chairman, I think we have a vote coming up. Thank you.

Gentlemen, again thank you. Your forces are performing, as we expect, magnificently and we are all very proud of the sailors and the marines that are doing the job. My father was a sailor and my brother was a marine. I was a soldier. But two out of three ain't bad.

Admiral CLARK. We love our United States Army.

General HAGEE. Thank you, Senator.

Senator TALENT. Your family had it pretty well covered. Thank you. Thank you, Senator.

I would just add something to what the Senator from Rhode Island said. Really we are all trying to make up for years when we never hit the bogie for procurement that you were saying we needed in the nineties, and at the same time fight a war, and at the same time transform. It is hard. Even with these additional investments, it is hard. I admire you two for the work that you are doing, and particularly for the vision that you have showed, Admiral, with Seapower 21.

General, let me ask you a couple of questions. I want to just get your opinion on how a couple of your programs are going. First, AAV, which is so important to Seapower 21. A couple years ago you added a Milestone C, I think, to the procurement process, and then last year additional testing time, and then this year the budget moves the milestone C back a year.

While on the one hand it does seem that you are actively managing, the program has been actively managed to make certain that it does not get into any trouble. That is good, but on the other hand you have to have questions about whether we are going to be able to make operational readiness dates. What is your opinion of the technical maturity of the program now? Are we going to be ready by fiscal year 2008? When are we supposed to be ready?

General HAGEE. The short answer is yes, sir, I am confident in it. The longer answer is that there was a number of things. One, the development testing was taking longer than we originally thought. The actual training of the crew was taking longer than we thought. Then the operational testing is a new system and we are still in the system development phase; we wanted to be sure that we got it right. So we extended the testing phase by a year in order to do good development testing and robust operational testing.

I am confident in the system, sir.

Senator TALENT. Are you still confident in the fiscal year 2008, or is it 2008 for your initial operational capability (IOC)?

General HAGEE. That is the correct IOC. Yes, sir, I am confident in that.

Senator TALENT. For the record, tell me what is happening in your judgment with V-22? Have we resolved the problems? Is it moving along the way you would like it to move along?

General HAGEE. Yes, sir, it is. It is really doing extremely well. We are about 80 to 85 percent finished with the high rate of descent testing and it is performing exactly as the model said it would. In fact, the envelope for this particular phenomenon is larger than for a normal helicopter. In other words, it is safer than a normal helicopter, and it is easier to come out of the phenomenon. All you do is you rotate the nacelles forward and you fly horizontally and you come out of it. It is not quite as easy to come out of the phenomenon if you are in a normal helicopter.

The maintenance and reliability problems that we had back around 2000, because of the redesign of the system, the number of hours between inspections continues to grow because we see no rubbing, no chafing at all. We have conducted operations on board the amphibs that went very well, and we are about 80 to 85 percent complete with the low-speed maneuverability testing and that is also coming out very well.

Senator TALENT. So far all systems go?

General HAGEE. All systems go, sir.

Senator TALENT. That is great. That is great news.

Admiral, let me ask you a question. I have a confidence level actually that we are okay. Yet I want to ask you, just because there are several things, when you put them together you say to yourself, well, maybe I should not have this confidence level.

The QDR force structure is the number of ships. You have commented you think that is a moderate risk type scenario. We are now below the QDR force structure level and we are also at war. You did retire these ships and I think I agree with it. I think it was a tough decision, but you have to make those decisions.

But in your judgment, still an acceptable risk level? Please comment on why that does not move up the risk level in your judgment?

Admiral CLARK. Let me say it like this. The sonar system, designed for the deep water, not the near-land area. A towed array sonar system in the same, fundamentally the same way. So a ship not optimized for the near-land arena. A gun system, a conventional gun system that is relatively short-range, 18,000 yards, 9 miles, does not provide you the reach that you are looking for in the future, that we have laid out in the investments for the future. A self-defense air defense system, but not a defense system that can protect anybody else.

So when I weigh all of those things, I have plenty of TLAM holes. There is not going to be canister and positions to fire TLAM, that is not an issue. A much more difficult issue for me is the Baseline 1 cruisers, which has an air defense capability. That decision was very difficult. But it is not mid-life because they are past the mid-life. This one, the Baseline 1s, do not have vertical launch in them, and so for them to play effectively in the game that we have from the future in either the missile defense arena or against the threats that we are dealing with for future, we have to put significant resources against them and the life expectancy. We are not at mid-life, but it is shorter than mid-life.

That is why I made those judgments. So the Baseline 1 is much more difficult than the 963 class. I want to say that I am personally wedded to the 963. I commanded the class leader. This is hard for me.

Senator TALENT. You are not dumping on these ships. It is not like they do not have value, but when you do not have all the money you want you have to make these tough decisions.

Admiral CLARK. I have to make those decisions. I could keep some of them, but I could not keep them in good conscience and look you in the eye and say: This is the best way to spend our resources. I want to assure you that I got zero pressure from anybody above me in the chain of command for this. This is the recommendation of Admiral Clark and the team in the United States Navy. This is what we believe collectively is the best thing to do.

Senator TALENT. Let me close, unless Senator Collins has any additional questions, and I will certainly recognize her for any she may have, on a real up beat note. I know you think the Sea-Swap program has worked well.

Admiral CLARK. It has worked phenomenally well.

Senator TALENT. Talk about some of the benefits of it and tell us how that compares in your judgment with forward home porting and the synergy that you see in the future. I mean, I do not imagine it is going to be all or nothing at all.

Admiral CLARK. First of all, it was a pilot. In our discussions, I told you my view of this, and this is the environment I have tried to create in the Navy, is let us encourage innovation. The fleet came forward with a proposal on how we could fly the Sea-Swap concept. I want to tell you, it is their plan, it is their approach. Admiral LaFleur, who is the commander of surface forces in the Navy, told me they have executed the first swap.

What it does for us is, I did not have to have the transit all the way from San Diego all the way out to the theater of operations. It saved us the transit two ways by flying the crew out there. So I just multiplied the effective utilization of the ship, in effect increased the numbers of ships that I have with on-station combat capability.

The first experience is complete. We are going to learn some things from it. But his report to me through the chain of command, through Admiral Natter, is that it has worked remarkably well.

Optimum manning is another concept. How are ways that we can thin down the manning in our ships by giving them technology and other things that will make them more effective? The U.S.S. *Milius* and the Mobile Bay have both been out there. I was on *Milius* in January. What a bright-eyed group of innovators. They have cut the manning in that ship by 23 percent.

We did not tell them to go do this. We said, where can you see areas that we could do this better? But here is one thing I want: I want every sailor to have a job full of rewarding job content in positions where they can make a difference, and they are doing that. It is working well.

Senator TALENT. I thank you both again for your service and for your time. I know you are certainly busy and I appreciate working with you, and we will continue to do it as we get the bill ready.

Admiral CLARK. Mr. Chairman, thank you for the opportunity to appear before you today.

Senator TALENT. We appreciate it very much. Thank you.

I think we will go ahead and recess and I will run and vote and come on back, so we do not keep the second panel waiting. Thank you all very much. [Recess from 3:50 p.m. to 4:05 p.m.]

All right, I thank the two distinguished members of the second panel for waiting. I was going to try and get your statements in anyway while the roll call was pending, but I am not sure we could have done it.

Our guests on the second panel, who we have reshuffled because we had to reschedule this—and I appreciate your flexibility—are John Young, the Assistant Secretary of the Navy, a figure well known to Congress and this committee; and Vice Admiral Mike Mullen, the Deputy Chief of Naval Operations for Resources, Requirements, and Assessments and thank you both for being here.

I am looking forward to your testimony. Secretary Young, please let us have your statement.

STATEMENT OF HON. JOHN J. YOUNG, JR., ASSISTANT SECRETARY OF THE NAVY FOR RESEARCH, DEVELOPMENT, AND ACQUISITION

Secretary YOUNG. Mr. Chairman, it is a great honor actually to come and talk to you. I think we have a good story to tell, so I appreciate your kindness in rescheduling the hearing. I have a written statement that I hope will be part of the record.

I recently visited our sailors and marines in the Persian Gulf area and I am proud to report to you that the commitment that we made and Congress supported in fiscal year 2003 to focus our taxpayers' dollars towards improving current readiness has yielded strong dividends. Today we have 6 carrier battle groups, over 70 ships, and more than 60,000 marines in theater who are trained, equipped, and carrying out the Nation's will, and our prayers are with them.

In my testimony to Congress last year, I emphasized that we were focused on building a foundation of solid, stable funding for our shipbuilding programs while working hard to control costs and take a more businesslike approach to these programs. While we still have work to do, I am pleased to tell you this year that we have made significant progress in all of these areas.

In June, the Navy and two of our principal shipbuilders successfully negotiated an unprecedented workload swap arrangement in which General Dynamics transferred its four-ship LPD-17 construction program to Northrop Grumman Ship Systems in exchange for additional DDG-51 work transferred from Northrop Grumman. This swap avoided a second lead ship challenge for the LPD program, improved the production learning curve, and provided production efficiency for the LPD-17 class.

We estimate the swap will provide savings and cost avoidance of at least \$473 million for the LPD-17 program. The agreement also allows General Dynamics to focus on DDG construction, looking ahead to DD(X) opportunities. This deal made good business sense for everyone and I must recognize the courage and willingness to explore innovative ideas demonstrated by General Dynamics, Nor-

throp Grumman, the Navy, and the Office of the Secretary of Defense (OSD) leadership that were key in making this happen, particularly the essential support of Congress in seeing a deal like this through.

The swap, in conjunction with the DDG multiyear contract, has stabilized both DDG and LPD production.

The fiscal year 2004 budget requests authority to enter into a multiyear procurement on the *Virginia*-class submarine. The combination of the DDG-LPD swap, the DDG multiyear, the *Virginia*-class multiyear, plus the funding in the budget for CVN-21, T-AKE, and LHD-8 provide a stable, low-rate, new ship construction program. The Navy and the Nation can build upon this stable foundation in the future.

We have also worked hard to control costs and avoid prior year completion bills. Our focused efforts to reduce change orders, to strictly manage ship configuration, and to properly fund to realistic cost estimates is paying dividends. The fiscal year 2004 to 2009 budget recognizes new prior year completion bills of approximately \$225 million as compared to over \$800 million from the fiscal year 2001 budget, \$487 million in fiscal year 2003, and \$2.2 billion in fiscal year 2002.

A perfect example of our resolve in this area was the decision to install the current and very capable combat system suite on CVN-77 within the budget, rather than the developmental system which was clearly going to generate additional prior year costs and likely force late delivery of CVN-77. Instead, we will install the new radars when they are ready in a spiral modernization effort.

We are also using new tools, such as broken or stepped share lines and incentive fee, to prevent cost growth on future contracts.

In the next 5 years, we will deliver or design the lead ship of eight new classes. This clearly shows our commitment to providing the most modern and capable warships to our fleet, sailors, and marines. Along with improved warfighting capability, these new designs allow us to implement fundamental changes in the way we man, operate, and maintain our ships.

DD(X) is the centerpiece of this leap forward. DD(X) is being designed to provide our sailors the survivability and flexibility of stealth, automation, and electric propulsion. In addition to its land attack capability, DD(X)'s dual helo spots and stern boat launch will provide new mission response options.

I am pleased to report the DD(X) program is well under way. The Navy has worked with our industry partners to forge a national team of our country's most capable ship designers and combat systems experts dedicated to its success. The DD(X) hull and combat systems will also provide a path to the CG(X) cruiser, which must be capable against the air, surface, and theater ballistic missile defense threats out into the 2050 timeframe.

We have also embarked on an exciting initiative to build the LCS in an entirely new way, exactly as you heard the CNO speak about. With your help last year, we were able to get a full 1-year jump on our original schedule. We are currently evaluating potential hull forms to use as our "sea frame." The LCS sea frame will be designed to accommodate different mission modules, allowing us to tailor the capability to the fleet's task.

We plan to develop and purchase the mission modules for LCS on a time line that ensures the most current technology is installed. Your support of this very innovative approach to shipbuilding has been instrumental in our ability to move forward so quickly with this ship.

We have combined many of the advances in our CVNX-1 and CVNX-2 programs into the new CVN-21 program, while maintaining the CVNX-1 development schedule. This is the first new carrier design since 1967 and will introduce such new capabilities as the electromagnetic aircraft launching system (EMALS), the pit stop concept for improved sortie generation, and enhanced survivability, while again reducing manning and maintenance requirements.

We also continue to advance the current and future combat value of our existing ships and future ships as we shift to open architecture designs, which serve as powerful tools for reducing software sustainment costs and increasing commonality. Our commitment to develop and field networkcentric systems, such as the Cooperative Engagement Capability Block II and the Joint Fires Network, further empower our forces by providing real-time awareness of the combat situation for our warfighters.

Finally, building on the success of our Standard Missile 3 (SM-3) tests, we have worked closely with the Missile Defense Agency to bring an initial missile defense capability to sea by 2004 and a more significant capability of up to 20 of our Aegis equipped destroyers by 2006. We have provided the dedicated use of one of our cruisers as a missile defense test ship and we are using the funds originally intended for an MDA test ship to develop and implement the SM-3 capability at sea earlier than originally planned.

To enhance our ability to deliver these systems, we have reorganized our Program Executive Officer (PEO) structure to bring all integrated warfare systems across all surface combatants, submarines, aircraft carriers, and amphibious ships under a single PEO. We have done the same thing for all our C⁴I systems throughout the Navy. Finally, we have consolidated all non-nuclear shipbuilding and modernization programs under a single PEO for ships to ensure that we take maximum advantage of scale with all of our shipbuilders and the lessons learned from one program are quickly transferred to other programs.

The fiscal year 2004 budget sustains the enormous strides made in personnel and readiness accounts while requesting \$11.4 billion for shipbuilding and modernization. We have increased the number of ships from the 5 indicated in the 2003 request to 7 in the 2004 budget request, resulting in 34 ships under contract.

The fiscal year 2004 budget also includes funds for the first *Ticonderoga*-class cruiser conversion, incremental funding for LHD-8, service life extension for three LCACs, and two SSBN to SSGN conversions. It requests, as the CNO mentioned, the \$1.5 billion R&D funds necessary to move forward with CVN-21, DD(X), and the LCS programs.

I believe we have crafted a balanced and properly focused budget request that ensures our Nation will have a stable and healthy shipbuilding industrial base as well as an efficient and appropriately sized infrastructure to support an optional force structure.

Our Navy-Marine Corps team is the most professional and capable naval force in the world. With your assistance, we will continue to provide maximum capability for our sailors and marines and maximum security for America.

I thank you again for the opportunity to tell this story to you, sir.

[The prepared statement of Secretary Young follows:]

PREPARED STATEMENT BY HON. JOHN J. YOUNG, JR.

Mr. Chairman, distinguished members of the subcommittee, thank you for this opportunity to appear before you to discuss the Department of the Navy's fiscal year 2004 budget request. I recently visited our sailors and marines in the Persian Gulf area, including Kuwait and Bahrain, and we can rest assured that our sailors and marines guard our freedom with a dedication born from a voluntary commitment to defend the ideals of our founding fathers. I am proud to come before you today and outline the contribution that we in the Navy and Marine Corps acquisition community are making to enable the Department of the Navy to field the most capable, mobile, and lethal force since its inception over 225 years ago.

The global war on terrorism has fundamentally changed the national debate on defense. To meet this challenge, difficult decisions were required to find the optimal mix within the portfolio of naval responsibilities, and within that, the shipbuilding acquisition objectives of the Department. We have been good stewards for the taxpayer by demonstrating creative thinking such as shipbuilding workload swaps, R&D funding for lead ships, and split funding for CVN 21; making sound fiscal decisions including stopping the growth in prior year shipbuilding costs; reviewing the need for some of our legacy systems; and leveraging these actions to increase the number of ships being requested in the fiscal year 2004 budget. By addressing key issues such as the cultivation of promising shipbuilding technologies, cost effective acquisition of mature platforms and systems, and improved maintenance of existing systems we have been able to increase the number of ships from the five indicated in last year's budget request to seven in the fiscal year 2004 budget request.

In striving to provide the warfighter with the latest capabilities, we have adopted the tenets of Naval Vision 21 and Naval Transformation Roadmap 21. In doing this, we have engaged in a full assessment of Naval Science and Technology funding to ensure we have addressed all technology needs to support these transformation mandates. To this end, technology demonstrations are planned using future years defense program (FYDP) funds that aim to meet the needs of our forces—stretching from the ocean floor to the edge of space, and from facilities in the United States to the tip of the spear throughout the world.

We are working extensively with industry to make each defense dollar go further. For example, the DD(X) team is cultivating the best minds in industry to ensure the DD(X) will provide the best ship design and ship systems possible. Our efforts however aren't limited to the early stages of a program's life cycle. We have recently brokered a swap with Northrop Grumman and General Dynamics to align our LPD and DDG shipbuilding programs more effectively. The result is a more robust and competitive shipbuilding industry with a lowered cost to the taxpayer. A true win-win situation. Additionally, we completed a disinvestments effort to identify and eliminate those items we carry and maintain in inventory that have limited function or application or are becoming obsolete and unaffordable. We plan to continue this effort to eliminate older systems with limited capabilities that have an inordinately high infrastructure cost to supply, train for, and support. Finally, we will continue to use multiyear procurements (MYP), for example, the proposed *Virginia*-class submarine MYP, and cost effective procurement quantities to help drive down the cost to the taxpayer but drive up the support to our sailors and marines.

Our actions to get the best value reach beyond the Department of the Navy. For example, we recently arranged a deal with the Missile Defense Agency (MDA) that assigns to them the U.S.S. *Lake Erie* to test sea-based ballistic missile defense. In return MDA will pay for, and upgrade, up to 20 Aegis equipped ships with as many as 90 Standard Missile 3 (SM 3) weapons to be installed for missile defense. This provides a limited sea-based missile defense capability by 2004 and greater capability by 2006, well in advance of the plans presented to you last year. It is this type of creative thinking that marks the new mindset that we are instilling within the Navy's acquisition community.

In a similar initiative, the Navy has worked in partnership with the Air Force to define a joint strategy for developing an unmanned combat air vehicle (UCAV).

The Air Force and Navy have been able to define a common set of requirements while also recognizing the unique needs of each Service. This work has allowed definition of a competitive acquisition strategy for UCAV and patterned after the successful Joint Strike Fighter (JSF) competition. UCAV is a critical tool for providing persistent surveillance and combat capability for sea based Navy platforms.

ENHANCING WARFIGHTING CAPABILITIES

We are changing and initiating programs to improve the warfighting capability of current and future forces. We are seeking joint opportunities and options wherever possible in taking these steps.

One critical initiative is known as Open Architecture. This effort will allow all Navy ships to eventually share common computers and computer operating systems. Key functions, such as tracking, fire control, and navigation, can be software applications that are shared among all ships and easily upgraded as discrete software modules. Unique software functions can easily be added for ships that need special capabilities. We can enhance our competition opportunities by allowing all qualified industry partners to offer proposals for writing software modules. The DD(X) engineering development modules and planned Aegis Combat System and Ship Self Defense System upgrades will be combined to achieve the greater goal of an open architecture for all Navy ships.

In addition to moving the Navy into the future of combat systems, the DD(X) also moves naval surface combatants to the future of electric powered, stealthy, and automated destroyers and cruisers. DD(X) will essentially take the next step towards efficiency in the destroyer construction process by implementing the design-build process successfully applied to *Virginia*-class and LPD-17 class. Further, the Total Ship Computing Environment developed for DD(X) will automate many ship systems and damage control functions, allowing the Navy to reduce the crew and thus the life cycle operating cost. The DDX hull and technologies will lead directly to CGX, the cruiser for the air and missile defense threat of the future.

Through the support of Congress, we have gotten an accelerated start on the other surface combatant family member, the LCS. LCS will allow the Navy to more affordably and effectively conduct mine countermeasure, maritime interdiction and anti-surface warfare operations, and enhance our capabilities against asymmetric threats. LCS also represents a new approach to building ships—where the hull will be a flexible “sea frame”. The sea frame’s common computer architecture, the “backbone,” will enable the sea frame to accommodate a variety of mission modules and will provide a path for future spiral upgrades to LCS’s capabilities. This family of ships will be the heart of the Navy’s Sea Strike capability until 2050 and beyond.

With the leadership of Secretary Rumsfeld, the Navy team defined a strategy to accelerate and integrate the technologies of CVNX-1 and CVNX-2 to yield the CVN-21 design. This ship will provide greater sortie generation capability through improved flight deck operational concepts. Further, the ship will use automation and survivability enhancements to accelerate the manpower reduction goals, providing lower operating costs for the fleet.

Ships alone cannot accomplish missions. First and foremost, we must have the unmatched sailors and marines of today’s force who turn our weapon systems into true warfighting capability. They need the tools that expand their reach and improve their effectiveness. The Department has taken several truly dramatic steps that will change combat capability in this area.

First, the Extended Range Active Missile (ERAM) provides an active missile allowing Navy ships to fire and forget and do so 200 miles over-the-horizon using surveillance systems such as the E-2C Advanced Hawkeye. ERAM will leverage the significant investment made by the Defense Department in the AMRAAM seeker, achieving the goals of maintaining jointness and of leveraging past investments wherever possible.

The UCAV will achieve the Chief of Naval Operation’s goal of persistent airborne surveillance capability combined with effective strike capability. The Office of the Secretary of Defense, the Air Force, and the Navy have worked together to harmonize requirements for UCAV. This partnership will accelerate the delivery of UCAVs for the Navy, providing competition and the potential for jointness.

The Army, Navy, and Air Force are working to join our requirements for Intelligence, Surveillance and Reconnaissance (ISR) systems. Navy ships are relying to a greater degree than ever on real-time delivery of ISR products and the commanders increasingly have the command and control tools to act on this information. Achieving a joint strategy in this area will accelerate delivery of these systems to our sailors and marines while assuring interoperability among the Services for joint operations.

Cooperative Engagement Capability (CEC) systems allow one Navy ship to fire on a threat based on the better quality tracking information provided from another Navy ship. CEC inherently improves the picture of the battlefield for all naval assets. The acquisition team has defined a strategy that will more efficiently use limited bandwidth and provide CEC-quality situational awareness to all participants in the theater of operations.

These and other tools will ensure that our sailors and marines have unmatched capability and technology for the battlefield of the future.

CHANGING OUR BUSINESS PRACTICES

The Department of the Navy remains committed to simplifying the acquisition system, streamlining the bureaucratic decisionmaking process, and promoting innovation. We are streamlining our regulations and instructions to remove unnecessary impediments and provide the maximum flexibility to our acquisition workforce consistent with law and higher regulation. We are also continuing to take advantage of numerous acquisition initiatives to shorten cycle times, leverage commercial products and capabilities, and improve the quality of equipment being provided to our warfighters. For example, we used direct dialogue with industry to accelerate by several months the process of defining and selecting the ERAM missile design.

In an environment where competition is limited, the structure of contracts is critical to providing tools for the program manager to use in delivering ships and weapons on schedule and within the budget. The Department is applying new contract strategies in an effort to focus greater attention on cost and schedule. We are implementing broken or stepped profit share lines to ensure that the Navy and industry are very focused on the cost target and that industry is rewarded for beating the target and penalized for exceeding the cost target. Further, we are shifting greater portions of fee to be awarded on an incentive basis upon accomplishment of critical path tasks. Finally, we are weighting fee towards the critical events at the end of a program that result in the desired goal—delivery of ships and weapons.

Evolutionary acquisition techniques show promise in programs such as DD(X) and LCS. We are seeking to strictly control requirements at each evolution or spiral in order to avoid program churn and associated cost growth. Program risk, and cost, can be most effectively managed by properly timing the development and introduction of new technologies at specific points in the development and production process. The extension of this step to production programs means carefully limiting changes during the carefully planned production process. We have imposed a strict discipline on ourselves that limits change during the critical phases of our major shipbuilding programs to stop the growth in prior year completion bills. By controlling the scope and timing of change in a planned manner, we know what changes will cost and how we will install them in the most economical manner.

The Department is working with industry as a partner across the full breadth of our shipbuilding programs. Industry can help us identify the best technologies and business practices for Department of the Navy programs. Such partnerships have been critical to negotiation of the new DDG multiyear contract, to completion of the DDG/LPD swap, and to formation of the DD(X) team. For example, the tri-partite agreement between Navy, General Dynamics, and Northrop Grumman stabilized both our DDG-51 and LPD-17 programs, avoided a “second lead ship” challenge for the LPD program, dramatically reduced risk and provided cost savings on the LPD program, and enhanced stability and competitiveness in destroyer construction. Furthermore, the swap agreement created a rare opportunity to build LPD-18 and LPD-19 as twin ships, providing the additional benefits of near-term cost savings and the longer-term benefit of having two ships with one configuration. This idea was adapted and applied to the carrier program by taking steps to share planning efforts and combine purchasing power on the CVN-70 complex overhaul and the CVN-77 new construction.

The Department also is actively improving its internal business practices, including integrating commercial best practices where feasible. By improving these practices, we expect to be able to shift more dollars into combat capability and quality of service. We believe that better information makes for better decisionmaking, both on the battlefield and at the budget table. We have four pilot programs in place utilizing enterprise resource planning (ERP) which aim to improve the quality of information available to our decisionmakers. These pilot projects will eliminate dozens of incompatible computer databases and the business processes that once supported those databases. ERP should produce financial and managerial information that is more complete, accurate, and timely. ERP will allow greater efficiency in our ship maintenance processes that should in turn deliver more ship availability for training or deployment. Our recent focus has been on converging the pilot programs to

achieve even greater synergy of management information across a broader spectrum of the Department, and working with the DOD Comptroller to ensure these efforts are advancing the uniform business management architecture under development.

In addition to better information, we need flexible and innovative tools to help manage the Department. Some of these tools, such as strategic sourcing, are being used already. Furthermore, competition helps achieve the best quality support to the sailor and marine at the lowest possible cost by introducing the discipline of the marketplace. Another approach we are taking to improve logistics support to the warfighter and reduce total life cycle system costs is through Performance Based Logistics (PBL). This year, all ACAT I & II fielded programs and all new programs submitted PBL implementation plans with milestones. PBL has been successfully implemented on numerous weapon system components (improving capability and lowering costs) and the intention is to expand these successes to major weapon systems and subsystems. We are also continuing to pursue Depot Maintenance Partnerships between the private and public sector. These partnerships provide increased capability to our depots while simultaneously reducing cost and improving warfighter capability.

We are working hard to ensure that our sailors and marines get needed technology in their hands today, not tomorrow. In areas ranging from Forward Looking Infrared upgrades for Marine Corps tanks, to ISR tools, to active anti-air warfare missiles, we are seeking greater jointness and taking advantage of prior DOD investments in order to reduce risk, lower cost, accelerate delivery, and provide greater interoperability.

FOCUSING ON OUR PEOPLE AND ORGANIZATION

To enable development of new capabilities and facilitate the adoption of new business practices, a number of organizational changes have been made. Because of the importance of opening the computing architectures and sharing combat system development across all ship platforms, we established a Deputy Assistant Secretary and a Program Executive Officer for Integrated Warfare Systems.

We also reorganized our business process owners by combining the Director of Acquisition and Business Management with the Acquisition Reform Office into a single Deputy for Acquisition Management. This new office focuses on business policy and implementation and infuses it with the innovative thinking and ideas of the office dedicated to reforming the way we do business. One of the primary goals of this reorganization is to shorten the time it takes new ideas to find their way into our acquisition business practices. The Deputy for Acquisition Management is directly supporting the DOD effort to streamline the OSD policy and processes for major weapon systems embodied in the new DOD 5000 series directives.

In order to improve logistics support to the warfighter, we established a Deputy for Logistics. The logistics office will coordinate efforts to insert logistics considerations early in the acquisition process where over 60 percent of the total life cycle costs are determined. Equally important, logistical support of our current systems is a costly and complex part of today's acquisition management task. Finally, the Deputy for Logistics will play an important role in guiding the implementation of ERP across the Department.

In today's environment, many technologies and systems cut across program, platform, and systems command boundaries. To leverage the expertise within our systems commands and ensure consideration and coordination of concepts that cross program boundaries, we created a virtual systems command. The systems command commanders will now work together to avoid duplication of capability and ensure that we achieve integration and interoperability benefits wherever possible within the Navy and Marine Corps.

Equally important, we are reshaping the acquisition workforce to concentrate on mission critical functions. These human resource plans call for an analysis of key characteristics of the acquisition workforce, an assessment and projection of changes in the workforce into 2008, and the identification of human resource process shortfalls that inhibit the ability to effectively manage this workforce. With the advent of civilian personnel "demonstration" programs with pay banding and the increase in outsourcing of commercial functions, we are seeing an emerging workforce that will be compensated based on their level of responsibility and contribution. Through enhancements to our career development program, which include continuous learning activities that augment minimum education, training, and experience requirements, we are developing our acquisition professionals to be better managers and leaders.

INTERNATIONAL COOPERATION

Cooperation with our allies remains a continued objective from which we can leverage our Navy funds and accrue interoperability and coalition warfighting capability. Programs such as Evolved Seasparrrow Missile, which is being developed in co-operation with nine of our partners, is proof that cooperation works as demonstrated by recent successful firings. The Rolling Airframe Missile program is a further testament that cooperation has substantive benefits. We have also continued to cooperate with Japan on technology to enhance our SM-3 missile and reduce development risk and cost. We are continuing our strong ties with the U.K. in a number of areas. Efforts are also underway to expand our cooperation into area and theater missile defense through the eight Navy Maritime Theater Missile Defense Forums. Each of these cooperative initiatives is aimed at reducing our costs, increasing interoperability, and achieving enhanced coalition warfighting capability.

SHIPBUILDING PROGRAMS

Our fiscal year 2004 budget request calls for construction of 7 ships in fiscal year 2004: 3 DDG-51 class destroyers; 1 *Virginia*-class submarine; 1 *San Antonio* (LPD-17) class Amphibious Transport Dock ship; 2 Lewis and Clark (T-AKE) auxiliary cargo and ammunition ships; and incremental funding for the fiscal year 2002 LHD 8, resulting in 34 ships under contract. The fiscal year 2004 budget request represents an increase of two ships over the five ships indicated in last year's budget request. In addition, we have requested funding for advance procurement of the seventh and eighth *Virginia*-class submarines, for advance procurement of CVN-21 and the CVN-70 refueling complex overhaul (RCOH), the first *Ticonderoga* class cruiser conversion and for service life extension modifications of three Landing Craft Air Cushion (LCAC) craft. The budget request fully commits the Navy to the conversion of four *Ohio* class SSBNs into SSGNs.

Completion of Prior Year Shipbuilding Contracts

Growth on ship construction contracts has eroded the confidence of the DOD and Congress in our estimating, budgeting, and execution process for current and future procurements. The Navy is committed to restoring the confidence of Congress and building stable programs to ensure force structure requirements are sustained.

Congress provided over \$700 million in fiscal year 2002 and almost \$1.3 billion in fiscal year 2003 to address cost growth for ships contracted in 1996-2001. The fiscal year 2004 budget request reflects \$636 million to address similar shortfalls in order to deliver ships authorized and appropriated in 1996-2001. Also visible in the Navy's budget request are the known requirements through the FYDP to address similar issues for ships appropriated through 2002.

The Department has taken a number of management actions to mitigate the existing condition and to prevent a reoccurrence of the situation for ships requested in fiscal year 2004 and future budget submissions. To prevent further increases to the Prior Year Cost to Complete funding shortfall, the Navy has instituted the following corrective actions:

- In fiscal year 2003 and beyond, shipbuilding programs have been budgeted to independent cost estimates prepared by the Cost Analysis Improvement Group or independent Navy estimate.
- Change order budgeting levels have been established to reflect maturity of respective programs.
- Shipbuilding and Government Furnished Equipment program managers have been directed to limit changes to critical safety issues.
- The Department has reestablished a senior level ship configuration panel to ensure required changes are validated and fully funded.
- We motivated industry cost performance through incentives in fiscal year 2002 and 2003 contracts.
- Prior decisions regarding workload splits among multiple yards have been reevaluated in light of the increased cost of having multiple "lead" ships.
- We are implementing more aggressive share lines and positive incentive strategies in new ship construction contracts in a further effort to establish realistic targets and to motivate industry management and performance.

The swap of DDG-51 and LPD-17 between General Dynamics and Northrop Grumman will also alleviate the potential for significant new prior year bills and allow the construction of the individual ship classes in the most efficient manner. We will continue to pursue innovative business approaches like this to reduce the risk of future Prior Year Cost to Complete bills.

Surface Combatants

Arleigh Burke (DDG-51) Class Destroyer

The fiscal year 2004 budget request includes \$3.198 billion for the procurement of 3 *Arleigh Burke* class (DDG-51) destroyers of a 10 ship MYP. The additional DDGs in fiscal year 2004 and fiscal year 2005 facilitate the innovative DDG/LPD swap agreement and increase force structure capability. The new 4 year, 10 ship, fiscal year 2002 through 2005, MYP contract awarded last year has cemented the DDG procurement profile and sustains our industry partners as we work toward the transition to DD(X) production.

DD(X) Destroyer

The Navy competitively awarded the DD(X) design agent and technology development contract in April 2002. The winning contractor has organized a national team of industry experts to achieve the most innovative and cost-effective solutions for development of the DD(X) through spiral development of technology and engineering, with promising systems being employed on existing platforms and other future ship classes. The Department will link the development of the DD(X) combat system to the opening of computer architectures in our DDGs, CGs, LPDs, and CVNs. This is a critical step for the Department and represents an effort to leverage every dollar Congress provides. Applying new design-build concepts to DD(X) is critical to improving the construction process for destroyers. The DD(X) design will reduce manpower requirements. The ship will capitalize on electric drive and electrical distribution systems to simplify ship operations, reduce maintenance, and enable future upgrades including directed energy weapons. The ship will be designed with reduced signature to provide the survivability necessary in the future combat environment. These and other features will provide more affordable future ship classes in terms of both construction and operation.

Littoral Combat Ship (LCS)

The LCS will be a networked, agile, stealthy surface combatant designed to counter asymmetric littoral threats such as diesel submarines, shallow water mines, and small boats through organic manned and unmanned vehicles and as part of a network centric battle force. The LCS was granted new start authority in the fiscal year 2003 authorization act and initial program funds were appropriated by Congress. The fiscal year 2004 budget request includes \$158 million for LCS platform and mission system development. The LCS spiral development acquisition strategy will support construction of multiple flights of focused mission ships with progressive capability improvements. Flight 0 is comprised of one ship planned for authorization in fiscal year 2005 (currently budgeted in RDT&E) and one ship planned for authorization in fiscal year 2006 (currently budgeted in SCN). Flight 0 will develop and demonstrate a modular hull design with performance attributes needed for new operational concepts in the littoral. The solicitation for preliminary design of LCS Flight 0 was released in February 2003.

Ticonderoga (CG-47) Cruiser Conversion Plan

The fiscal year 2004 budget request includes \$194 million for systems that will add new mission capabilities and extend the combat system service life of the *Ticonderoga* (CG-47) class. The upgrade of these ships will add new, and enhance existing, combat system capabilities for land attack, CEC, and Area Air Defense Commander missions to improve compatibility in joint and coalition warfare environments.

Aircraft Carriers

Nimitz Class

In May 2003, we will commission U.S.S. *Ronald Reagan* (CVN-76), the ninth of the *Nimitz* class of aircraft carriers. Also in 2003, we will lay the keel of the tenth, and last, ship in the *Nimitz* class. That ship, recently named the *George H.W. Bush* (CVN-77), is scheduled for delivery in 2008.

CVN-21 Class

CVN-21, previously known as CVNX-1, is a fiscal year 2007 ship that incorporates many advanced technologies and design changes originally slated for CVNX-2. Acceleration of these technologies into the lead ship of the class increases warfighting capabilities and reduces life cycle costs. CVN-21 now includes: a new propulsion plant; new and improved electric plant that provides three times the electrical generation capacity of a *Nimitz* class carrier; Electromagnetic Aircraft Launching System; advanced arresting gear; a new integrated warfare system; enhanced flight deck; improved weapons handling and aircraft servicing efficiency; in-

creased sortie generation rate; improved survivability; and allowance for future technologies and additional manpower reductions. We are working with our industry partners to improve the design-build effort for CVN-21 to allow efficient production, earlier delivery, and future technology insertion.

Amphibious Ships and Craft

LPD-17

The LPD-17 *San Antonio* class of amphibious transport dock ships represents a critical element of the Navy and Marine Corps future in expeditionary warfare. The 12 ships of the *San Antonio* class will functionally replace four classes of amphibious ships. The fiscal year 2004 budget request includes \$1.2 billion to fully fund the construction of the sixth ship of the class. Five additional LPD-17s are included in the FYDP, with the final ship of the 12 ship class planned beyond the FYDP. Current metrics indicate the LPD-17 program team is now performing in a predictable and disciplined manner. Detail design of the lead ship is completing and fabrication has started on over two-thirds of the lead ship construction units. LPD 18 construction began in February 2002 and LPD-19 construction commenced last summer. We plan to award the contract for LPD-21 (U.S.S. *New York*) later this year to honor the victims of the World Trade Center attack.

LHD-8

In accordance with congressional direction to incrementally fund LHD-8, the fiscal year 2004 budget requests \$355 million for continued detailed design and construction. LHD-8 will be the first big deck amphibious ship that will be powered by gas turbine propulsion and all of its auxiliary systems will rely on electricity, rather than steam. This change is expected to realize significant lifecycle cost savings.

LHA(R)

The fiscal year 2004 budget requests \$65 million in R&D for LHA(R), a spiral development variant of the LHD-8 known as the Plug Plus, which provides a longer and wider platform capable of increased vehicle lift, better survivability, and a suitable weight margin. This funding supports ship design development, live-fire testing activities, and other risk mitigation efforts leading to a planned ship construction award in fiscal year 2007.

Auxiliary Dry Cargo Ammunition Ship (T-AKE)

The fiscal year 2004 budget request includes \$722 million for the fifth and sixth ships of this 12 ship T-AKE class. Last summer the initial critical design review was conducted for the class design, and construction of the lead ship is expected to commence this fall. Lead ship delivery is scheduled in fiscal year 2005.

Landing Craft Air Cushion (LCAC)

Our fleet LCACs saw dramatically increased operational tempo supporting worldwide operations during the past year, underscoring the need for the LCAC Service Life Extension Program (SLEP). The program, designed to extend the service life of LCACs to 30 years, had several notable accomplishments during the past year including:

- “On schedule-on budget” delivery of LCAC 44, the first SLEP craft;
- Excellent production progress on the fiscal year 2000 and 2001 SLEP craft with delivery scheduled before the end of 2003; and
- Contract award for the fiscal year 2002 and 2003 SLEP craft.

The fiscal year 2004 budget requests \$73 million SCN for three additional LCAC SLEPs.

Submarine Programs

Virginia (SSN-774) Class Attack Submarines

With current construction progressing as scheduled, the fiscal year 2004 budget request includes \$2.5 billion for the sixth ship and advance procurement for the seventh and eighth ships of the *Virginia* class. Further, the budget requests permission to enter into a multiyear contract to provide program stability and enable substantial cost savings. Approximately \$400 million in fiscal year 2004 for Economic Order Quantity advance procurement in support of a seven-ship, fiscal year 2004–2008 MYP is included in the budget request. The *Virginia* class detailed design is complete. The lead ship, the U.S.S. *Virginia*, is over 80 percent complete and early construction has validated the effectiveness of the design-build concept. Negotiations are underway on the fiscal year 2003 Block Buy contract and the Navy is reviewing strategies to optimize the planned MYP.

SSGN

The fiscal year 2004 budget request includes over \$1.2 billion in procurement and R&D for the conversion efforts of the first two *Ohio* class submarines, funding for the Engineered Refueling Overhaul (ERO) of the third submarine, and advanced planning for the fourth and final ERO and conversion planned to begin in fiscal year 2005. When completed, these submarines will provide transformational warfighting capability carrying up to 154 Tomahawk cruise missiles, support sustained deployed special operating forces, and sustain our submarine force structure. The fiscal year 2004 budget request also funds attack weapons system procurement. Recently U.S.S. *Florida* successfully launched two Tomahawk missiles from a Multiple All-Up-Round Canister in a demonstration and validation (DEMVAL) test. The DEMVAL test confirmed that the conversion of SSBNs to SSGNs will work as envisioned with the ability to carry Tomahawk cruise missiles and support deployed special operating forces. Lastly, we are exploring opportunities for public-private partnering in this program. The U.S.S. *Ohio* recently entered Puget Sound Naval Shipyard and began its refueling overhaul, the first step towards SSGN capability. The acquisition team has developed a creative plan to accelerate delivery of SSGNs while working to stagger the conversions to allow key workers and managers to apply lessons learned to each sequential submarine. The assistance of Congress was critical to the signing of the SSGN design contract in September 2002.

PRECISION MUNITIONS

Tactical Tomahawk

Tactical Tomahawk missile begins full rate production in fiscal year 2004. Tactical Tomahawk significantly improves performance through an improved warhead, fuzing, and navigation improvements. This is accomplished at almost half the cost by using innovative manufacturing and production techniques. The Tactical Tomahawk completed successful developmental test shots from a simulated ground launcher in August 2002 and an underwater launcher in December 2002. The program subsequently awarded a Low Rate Initial Production (LRIP) contract in October 2002, and exercised an option for additional missiles in January 2003, for a total of 192 missiles. The fiscal year 2004 budget requests authority for a fiscal year 2004-fiscal year 2008 MYP.

MINE WARFARE PROGRAMS

Organic Airborne Mine Countermeasures

The fiscal year 2004 President's budget requests funding for a variety of airborne mine countermeasure systems that will be employed by the MH-60S helicopter as an organic capability. Specific systems are:

- AN/AQS-20A Advanced Minehunting Sonar and the Airborne Mine Neutralization System (AMNS) are being developed to counter deeper moored mines and visible bottom mines. The Department is requesting \$17.2 million for the AN/AQS-20A to continue system developmental testing and \$14.5 million to continue development through critical design reviews on the AMNS.
- The Airborne Laser Mine Detection System (AN/AES-1) and the Rapid Airborne Mine Clearance System (AN/AWS-2) are being developed to counter near surface and floating mines. The Department is requesting \$21.9 million to complete developmental testing and award two AN/AES-1 LRIP units. The budget also requests \$31.2 million to complete critical design review and begin developmental testing of AN/AWS-2.
- The Organic Airborne and Surface Influence Sweep (OASIS) will counter influence mines not found using hunting systems. The Navy is requesting \$14.8 million for completion of critical design review and commencement of development testing.

Long-term Mine Reconnaissance System (LMRS)

The budget request of \$56.5 million will continue LMRS baseline development through developmental test and preparation for operational testing. The LMRS program also incorporates development of a Mission Reconfigurable Unmanned Undersea Vehicle (MRUUV).

Remote Minehunting System

The Remote Minehunting System (RMS) is being developed as an unmanned semi-submersible vehicle to deploy from surface combatants and operate remotely over-the-horizon. This new organic minehunting capability is to be integrated into

DDG-51 Flight IIA (Hull 91-96) ships and is being considered for LCS. The Department requested \$55.5 million to complete critical design and continue fabrication of Engineering Development Models and to conduct technical evaluation in preparation for operational evaluation in fiscal year 2005.

INTEGRATED WARFARE SYSTEMS PROGRAMS

Open Architecture Concepts

The Navy intends to implement open architecture concepts into its future ships and current and future combat systems using commercially available, widely accepted interface standards to bring commercial products from multiple vendors to bear on mission-critical systems. The Navy efforts will include leveraging the Hiper-D open architecture effort into the DD(X) total ship computing environment and into all future ship and submarine system developments. The Navy is integrating the command and control and combat systems information flow using open specifications and standards and open architecture constructs, in order to participate in FORCEnet and other global information networks.

FORCEnet

Through the FORCEnet concept, the Navy is transforming future and existing assets to a joint, netted, distributed, and forward stationed force. It will bring an expanded "toolbox" of capabilities to the joint warfare commander as the Navy participates more and more in integrated joint operations. Network centric operations will be the foundation of our transformation to the force of the future and the key enabler in network centric operations will be the FORCEnet concept. FORCEnet is not a system; rather it is the architecture by which we will integrate our sensors, networks, decision aids, weapons, and warfighters into an adaptive human centered maritime system. FORCEnet will allow the Navy, as a part of an integral joint force, to leverage legacy and developing capabilities to achieve dominance across the full spectrum of warfare missions.

Ship Self-Defense (SSD)

Ship self-defense is provided by weapon systems and equipment related to multiple primary warfare areas; Anti Ship Cruise Missile Defense, Surface Warfare, Undersea Warfare, Electronic Warfare, Anti Terrorism/Force Protection, Mine Warfare and Command and Control. Currently fielded systems allow ships to defend against today's threats, while new systems and improvements to existing systems are being developed and procured to meet the future stressing threats. The Ship Self Defense System (SSDS) forms the centerpiece of future combat systems for aircraft carriers and amphibious ships, enabling them to pace the increasingly lethal threat. SSDS is the integrator for the individual detection and engagement elements of the combat system. An open architecture system with automated weapons control doctrine, SSDS also integrates with the CEC and the Tactical Data Links. Last year, the Navy conducted rigorous land based testing on SSDS Mk 2 Mod 0 at the Surface Combat System Center, Wallops Island, in preparation for the U.S.S. *Nimitz* battle group. In May 2002, land based testing was transitioned to at sea testing for the *Nimitz* and the Wallops Island facility started to focus on SSDS Mk 2 Mod 1 testing for the U.S.S. *Ronald Reagan*. After *Reagan*, Wallops will focus on SSDS Mk 2 Mod 2 for "first of class" testing for LPD-17 bringing a revolutionary combat capability to the amphibious fleet. The fiscal year 2004 budget includes \$94 million for the SSDS.

In addition, we continue to invest in upgrading the detect and engage portions of Ship Self Defense programs. The Surface Electronic Warfare Improvement Program (SEWIP) is a spiral development effort initiated to provide a robust, full spectrum electronic warfare system following cancellation of the Advanced Integrated Electronic Warfare System. SEWIP will build on the legacy SLQ-32 system to field capabilities against next-generation threats. Fiscal year 2004 budget includes \$53 million for the development of Block 1 electronic warfare improvement. The fiscal year 2004 President's budget request includes \$41 million WPN for the Close-In Weapons System (CIWS) that funds procurement, engineering support and installation of Block 1B for eight ordnance alteration (ORDALT) kits and upgrades. The eight ORDALT kits and upgrades will be combined with kits already onhand for installation on 13 ships. Fiscal year 2004 Rolling Airframe Missile (RAM) funding is \$48 million WPN for Block 1 ORDALT kits, Block 1 Guidance and Control section procurements, and 90 missiles. Fiscal year 2004 RAM installations will be on five ships. Finally the Evolved Sea Sparrow Missile has just completed successful developmental testing on the Self Defense Test Ship and remains on schedule for OPEVAL in April aboard the U.S.S. *Shoup*. The fiscal year 2004 budget includes

\$113 million WPN for procurement of 105 missiles, production engineering, and performance characterization.

Extended Range Active Missile (ERAM)

Despite the cancellation of the Standard Missile 2 (SM 2) Block IVA in December 2001, the Navy has an existing extended range (ER) AAW mission requirement as defined in the 2002 Navy Transformational Roadmap. A robust ER AAW missile with engage-on-remote capability against overland cruise missiles is key to achieving this requirement, providing flexible firepower throughout the battle space utilizing a variety of targeting platforms. The Navy's approach to this mission is the ERAM, which uses a SM 2 Block IV propulsion stack with an active AMRAAM seeker to provide enhanced capabilities. The ERAM approach is a low risk, non-developmental item approach and supports an fiscal year 2010 Initial Operational Capability. The fiscal year 2004 budget includes \$35 million for ERAM development.

Sea-based Terminal Missile Defense

The Navy sees a unique requirement for sea-based, terminal ballistic missile defense capabilities. The Department of Defense has tasked the Navy in conjunction with Missile Defense Agency (MDA), to study the requirement of a sea-based, terminal missile defense. The Navy acquisition team has identified at least two options for providing a Sea-Based Terminal Missile Defense:

- Spirally evolve the ERAM missile to incorporate TBM fuzing and lethality improvements; or
- Evaluate the potential for the extended range PAC-3, known as Pegasus, to integrate with Navy ship systems.

The recommended approach will depend on the specific threat and performance requirements defined, operational need date, and funding environment.

Midcourse Missile Defense

The Navy-MDA team executed three consecutive successful missile intercepts utilizing the Aegis Element of the Ballistic Missile Defense System culminating in the groundbreaking milestone of a ship-launched missile intercepting a target missile during its ascent phase. The Aegis BMD element also successfully met all objectives in two ground based missile defense tests in late 2002.

Standard Missile

The fiscal year 2004 budget request for \$148.3 million will procure 75 SM 2 Block IIIB missiles. The budget request will extend missile procurement of the remaining 942 missiles through fiscal year 2013 vice fiscal year 2008.

Joint Fires Network (JFN)

A further step forward in Network-Centric Warfare and one of the Navy's transformational initiatives is the Joint Fires Network (JFN). The fiscal year 2004 budget includes \$159 million for JFN. It is the interface of the intelligence/surveillance/reconnaissance, target, and command and control capabilities of three existing stand-alone systems: Joint Services Imagery Processing System—Navy; Global Command and Control System—Maritime; and Tactical Exploitation System—Navy. The JFN is not a traditional program. The virtual program office works to eliminate duplication and retain complementary elements each has to offer. In addition, the team that validated the JFN analysis of alternatives has continued to support the JFN engineering team in its spiral development efforts to interface and converge the various functions of the three programs. JFN will serve as a building block for the Navy's more extensive FORCEnet concept and is being fielded as part of the Department's emergency wartime response to get critical capability to the warfighter quickly.

Cooperative Engagement Capability (CEC)

The fiscal year 2004 budget request includes \$160 million for CEC. CEC provides a significant step forward in transforming our situational awareness of the battle space. CEC's successful completion of OPEVAL allows implementation of this capability within the fleet and is a major step in developing a network-centric force. This transformational program allows one ship to shoot a weapon at a generated target based on another ship's firing solution for the first time in naval history. CEC is being integrated into our E-2C aircraft and follow-on test and evaluation of this added capability is ongoing. CEC is moving forward with a solicitation this summer to compete a next generation design that will be smaller, more affordable, and more bandwidth efficient while providing significantly higher performance and potentially supporting joint service use.

SUMMARY

The Navy acquisition team has taken many positive steps during the past year. From moving forward with the SSGN design contract to initiating the LCS program, the support and direction of Congress has been essential to our progress. I am most grateful for the assistance of this committee for all of the Department of the Navy's efforts.

I would report to you today that the shipbuilding program and associated industrial base is on the verge of being stabilized, a key remaining facet of this is the proposed *Virginia*-class submarine multiyear. The Department will have a chance to manage these programs and control cost going forward. This core shipbuilding program can be built upon in the future to continue the recapitalization of the Navy fleet. Through the use of innovative acquisition initiatives, our Nation will have a healthy shipbuilding industrial base and an efficient and an appropriately sized infrastructure to support an optimal force structure.

In the end, the ship fleet is a tool of our sailors and marines. Today, the Navy and Marine Corps have used all of the ships in that fleet to the fullest degree possible, putting combat capability exactly where the Nation needs it as part of the Joint Force. Naval forces are also forward deployed, providing clear presence and protecting the United States' strategic interests. We have the finest naval force in the world. With your assistance, we will continue to improve every aspect of our business to provide the maximum capability for our sailors and marines and the maximum security for America.

Senator TALENT. Thank you. It is a good story.

Admiral Mullen.

STATEMENT OF VICE ADM. MICHAEL G. MULLEN, USN, DEPUTY CHIEF OF NAVAL OPERATIONS FOR RESOURCES, REQUIREMENTS, AND ASSESSMENTS

Admiral MULLEN. Thank you, Mr. Chairman, and thank you for the opportunity to appear before this subcommittee today to discuss our United States Navy as a proud member of the Navy and Marine Corps team.

While not asked to testify today, sitting in back of me today is Lieutenant General Bob Magnus, who probably knows as much about our program as anybody. He is my counterpart in the Marine Corps and he worked hard along with us to bring this program forward, and I am grateful for that support.

I would like to express my great appreciation for your outstanding and longstanding support, which continues to be vital and is at the foundation of our ability to project our naval forces to the four corners of the globe.

Since last year we have been very busy. Your Navy has been a continuing participant in the global war on terrorism and Operation Enduring Freedom, where we deployed 9 of our 12 aircraft carriers and 6 of our 12 amphibious ready groups, and in recent weeks and months in the buildup and execution of Operation Iraqi Freedom, in which 7 of our carriers and 9 of our 12 big amphibious ships are also deployed along with, as the CNO said, 70 percent of our air wings. Many of our naval forces deployed to fight in Operation Enduring Freedom are now redeployed to fight in Operation Iraqi Freedom, less than 18 months later.

Your Navy now and in the future is a joint, sea-based, interoperable, networkcentric, power projection force and continues to provide a terrific return on the taxpayers' investment. In the last few years, as you have heard and, our CNO, Admiral Clark, has made improving our readiness accounts a top priority and, with your support, we have achieved the highest level of readiness I have seen during my almost 35-year career.

I believe the President's 2004 budget is also transforming our Navy. Admiral Clark's comprehensive vision of Seapower 21 provides a strong framework upon which to build for the future. We have had healthy debates in the Pentagon on major issues which have centered on the urgency of moving forward and the requirement to be able to fight today as well as transform for the future.

I believe Secretary Rumsfeld has created a positive atmosphere in which these debates take place and the result has been a better program for the Navy and for our Nation. We are transforming much more than the equipment we buy. This budget supports our ability to continue to transform our most important resource, our people. We have adopted a transformational new global concept of operations and we are looking to reorganize our operational structure from the old way of 19 independent striking groups to a new way of 37 independent striking groups, including carrier striking groups, expeditionary strike groups, surface strike, TBMD groups, and SSGNs.

In conjunction with the Missile Defense Agency, we expect to field a sea-based missile defense capability in fiscal year 2004. These changes are exciting and meet head-on the challenges of the 21st century in which widely dispersed and netted forces with combat capability will become the norm.

At the heart of this change is the sea base and the concept of sea basing, which notionally is a scalable collection of joint warfighting capabilities distributed across interoperable platforms netted together and sustained from the sea without reliance on shore facilities within the joint operations area.

I also believe we are currently at an important inflection point and decisions this year and in the near years to come will determine the capabilities we will have in our Navy and our Marine Corps for the next 3 or 4 decades. Our current program has eight new classes of ships, as Secretary Young has said. They include our future carrier, CVN-21, our transformational land attack destroyer, DD(X), which is also our R&D centerpiece for the future of surface ships and a member of our family of ships, along with our Littoral Combatant Ship, the LCS, the LPD-17, and our SSGNs, to just name a few.

We have changed the trend on our recapitalization of our Navy and we are compelled to do so to get to the future of about 375 ships. To get to that goal, we need to sustain a shipbuilding account of 10 to 12 ships a year and about \$12 to \$14 billion a year in constant fiscal year 2003 dollars. We are also asking for funds to buy the EA-18 Gulf, which the CNO mentioned in his testimony, to replace our aging EA-6Bs, funds for Joint Strike Fighter, and for the Advanced E-2, all of which are critical parts as we move forward.

In order to recapitalize, we took some near-term risks the garner resources for future investment in both ships and airplanes. These were particularly tough decisions, but on balance calculated to take low to moderate risks now in order to avoid high risk in the future.

In both ships and airplanes, we rely heavily on the private sector, especially the national treasures of our industrial base. I truly believe we have turned the corner in recapitalization and we must continue the trend in future budgets.

In particular, I would like to thank this subcommittee for its strong longstanding support in shipbuilding. Without ships, we are not much of a Navy. Our priorities continue to be to sustain the readiness necessary to fight the global war on terrorism, to recapitalize and transform our Navy, to invest in our sailors, to improve our networks both in a operational sense and in a business sense, and to provide quality training both individually and on our training ranges.

Again, Mr. Chairman, thank you for your continued support and I look forward to answering your questions.

[The joint prepared statement of Admiral Nathman and Admiral Mullen follows:]

JOINT PREPARED STATEMENT BY VICE ADM. JOHN NATHMAN, USN, AND VICE ADM. MICHAEL MULLEN, USN

Mr. Chairman and members of the committee, we appreciate the opportunity to appear today. The investment you've made in America's Navy has been vital to the Nation's security and your Navy's ability to project more power, more protection, and more freedom to the far corners of the Earth. Thank you for your exceptional and continuous support.

I. YOUR NAVY TODAY

This is a time of tremendous challenge and accomplishment for our Navy. Our men and women operating in the air, on and under the sea, and on the ground are at the leading edge of the global war on terrorism.

Today, there are 168 ships deployed, more than half of the Navy, providing persistent combat power forward; this includes 7 of 12 aircraft carriers, and 9 of our 12 big deck amphibious ships (LHA/LHDs). They are deployed in support of the Nation's interests in the Persian Gulf, the Mediterranean, the Indian Ocean, and the Western Pacific. Still others are preparing for deployment or continuing operations like strategic deterrent and counterdrug patrols in support of other national imperatives.

II. YOUR FUTURE NAVY

The 21st century sets the stage for tremendous increases in precision, reach, and connectivity, ushering in a new era of joint operational effectiveness. We clearly will be able to integrate sea, land, air, and space through enhanced network technology to a greater extent than ever before. In this new, unified battlespace, the sea will provide the vast maneuver area from which to project direct and decisive power.

To navigate the challenges ahead and realize the opportunities, we developed this past year a clear, concise vision—Sea Power 21—for projecting decisive joint capabilities from the sea. The Chief of Naval Operations has already described this vision to you, so we will not repeat that description here. But we want to emphasize to you that the Sea Power 21 vision will be put into practice through a new global concept of operations (CONOPS) to distribute our combat striking power to a dispersed, networked fleet. This will optimize our flexible force structure and create additional, scalable, independent operating groups capable of responding simultaneously around the world. This distribution of assets will take us from 19 independent strike capable groups to 37 independent strike capable groups with the full implementation of the global CONOPS. Sea Power 21, put into practice through the global CONOPS, will provide increased power-projection.

Integral to Sea Power 21 and to ensuring access to critical corners of the globe through operational independence is the Sea Base. The Navy and Marine Corps team is working closely to determine the best mix of expeditionary ships that will make up the future Sea Base. In addition to naval requirements, we will also consider other joint missions that may arise such as the need for a joint command ship, hospital ships, and an Afloat Forward Staging Base. We will know more about these requirements over the next year as we complete ongoing efforts such as the Joint Forcible Entry Study and the Defense Science Board Seabasing Study. As we begin procurement of MPF(F), LHA(R), DD(X), LCS, MV-22, and JSF, we have a unique opportunity to design an entire package of capability to support Sea Basing and Expeditionary Maneuver Warfare. We are facing a rare inflection point in history with

several new ship classes coming on line within the next few years. What we decide to build today will impact the Navy for the next 30 to 40 years.

III. CONTEXT FOR OUR FISCAL YEAR 2004 BUDGET REQUEST

In recent years the Navy improved its readiness by properly funding our current readiness accounts, deepening the growth and development of our people, and developing innovative operational concepts and capabilities.

We also sharpened our focus on future force structure—to buy the ships, aircraft, and the capabilities needed for tomorrow's Navy. At the same time, we did not overlook the important gains our focus on current readiness made these last few years; it produced the more responsive force on deployment today. As a result, we looked hard at ways we could balance these priorities and our discretionary investments to both satisfy the near-term operational risks and prepare for the long-term risks of an uncertain future. This year we made hard choices across the fleet to do more to mitigate our future risk while sustaining our current readiness gains.

Our fiscal year 2004 budget request includes an initiative to accelerate the retirement of our oldest, least capable, and most maintenance-intensive ships, and to apply the savings this decision produces toward higher recapitalization priorities. Our preferred inactivation timeline would produce \$1.2 billion across the FYDP for this purpose.

Accelerating the retirement of the *Spruance* class destroyers, the baseline 1 Aegis cruisers, and selected *Oliver Hazard Perry* class frigates was one of the most difficult decisions we made in building this year's budget. Although difficult, we firmly believe it is the right decision, one we made only after carefully considering the risks, both in the near-term and in the long-term. Current Navy warfighting analysis of likely combat scenarios over the next 10 years indicates that the warfare missions for surface combatants are not well met by *Spruance* class destroyers, baseline 1 Aegis cruisers and older *Perry* class frigates. In the long term, we need the next generation destroyer, DD(X), the next generation cruiser, CG(X) and the Littoral Combat Ship to address these missions.

Fundamentally, we believe aggregate warfighting capability based on the type and mix of key weapon systems in the fleet is a better metric than the total number of ships when analyzing the risk attendant to various force structure options. While it is true that one ship can only be one place at a time, and that below a certain threshold the total number of ships does matter, our judgment is that the near-term retirements we propose do not cross the threshold of unacceptable risk. Instead, accelerating the retirement of these selected ships adds little risk in the near-term, but helps significantly in facilitating our transition to the numbers, type, and mix of ships we will require to execute the range of missions we anticipate in the 21st century.

In assessing the risk of reducing our legacy surface combatant inventory, we examined three criteria by which our aggregate warfighting capability should be measured: capacity for strike missions, performance against submarine and surface ship threats, and contribution to air defense.

Strike warfare capabilities affected by the decommissioning of *Spruance* destroyers are met by the simultaneous commissioning of *Arleigh Burke* class destroyers; the number of Vertical Launch System (VLS) cells available in the fleet for Tomahawk by fiscal year 2004 is greater than in fiscal year 2001 despite the decommissionings, and it rises steadily thereafter. *Perry* class frigates and baseline 1 Aegis cruisers, the oldest in the inventory, have no VLS or Tomahawk capability.

The most effective surface combatant weapon system for anti-submarine and anti-surface warfare (ASW/ASUW) is the combination of a Lamps Mk III helicopter and an Aegis warship. The net result of the planned ship decommissionings and *Burke* class destroyer commissionings is to temporarily reduce the total fleet capacity for helicopter embarkation, but the number of deck spots for helicopters available still exceeds the number of helicopters in the inventory to fill them.

The ability to maintain a shipboard protective anti-air warfare shield over a broad area is best delivered by the Aegis Weapon System and the SM-2 Block IIIB VLS missile. Neither the *Spruance* nor *Perry* class ships are Aegis equipped, and the baseline 1 Aegis cruisers have Mark 26 rail launchers which can only shoot older, less capable missiles. We are focusing our Cruiser Conversion efforts on upgrading the 22 cruisers with VLS for future mission requirements, including ballistic missile defense (BMD). The cost of doing this for the baseline 1 cruisers is prohibitive.

In every case, continuing to operate these ships for the few years remaining in their useful lives adds little to our aggregate warfighting capability while hampering our ability to move forward with critical recapitalization efforts.

We will continue to pursue efficiencies that improve our warfighting capability. We are committed to producing the level investment stream that will help implement our bold new Navy vision and produce the number of future ships, aircraft, and systems we need to counter the 21st century threat. Harvesting savings for reinvestment is an important part of that effort, and we will continue to examine the potential efficiencies while weighing the operational risks, both now and in the future.

This year, we intend to:

- Sustain our current readiness gains to support the global war on terror;
- Deepen the growth and development of our people into the 21st century, high-technology personnel force that is our future; and
- Invest in our bold new Navy vision—Sea Power 21—to recapitalize and transform our force and improve its ability to operate as an agile, lethal, and effective member of our joint, networked warfighting team.

IV. INVESTING IN SEA POWER 21

Our 21st century Navy will be a joint, netted, dispersed power projection force and Sea Power 21 is the framework around which our Navy will organize, integrate, and transform. It prescribes a strategy-to-concepts-to-capabilities continuum by which current and future naval forces will exploit the opportunity that information dominance and rapid, highly accurate, and lethal power projection and defensive protection capabilities bring to us.

We have started to “turn the corner” in our ship and aircraft recapitalization program. The fiscal year 2004 budget request provides funding for seven new construction ships, the final two of four planned SSBN-to-SSGN conversions, and the first ship in our Cruiser Conversion program. In all, our shipbuilding program includes \$12.2 billion, a significant increase above last year. The seven new ships include three *Arleigh Burke* class (DDG-51) destroyers, one *Virginia* class (SSN 774) fast attack submarine, one *San Antonio* class (LPD-17) amphibious transport dock, and two *Lewis and Clark* class (T-AKE) dry cargo and ammunition ships.

Additionally, we invest more than \$1.5 billion for R&D in transformational shipbuilding programs such as CVN-21, DD(X), LCS, and SSGN, discussed later in this statement. Each of these platforms will bring to the force unique capabilities focused on distinctly different mission sets. They will complement each other, and each will enhance the others’ ability to accomplish its primary mission. Pressing ahead with all of these programs is essential to recapitalizing the fleet with the right mix of future capabilities.

Demonstrating Navy’s commitment to stabilizing the shipbuilding program and industrial base, the fiscal year 2004 budget presents a plan for multiyear procurement for *Virginia* class SSN. In addition to the MYP strategies in place for DDG-51 and requested for *Virginia* class, we plan on funding the lead DD(X) and LCS in RDTEN funds beginning in fiscal year 2005 and split funding CVN-21 over 2 years beginning in fiscal year 2007. We are committed to the continued pursuit of alternative funding strategies to both stabilize the shipbuilding accounts and increase the shipbuilding rate while maintaining fiscal responsibility and doing things that make sense.

The following describes the core capabilities, and our investments in our highest priority programs supporting our vision of a 21st century Navy.

Surface Combatants

The 2001 Quadrennial Defense Review Report stated the importance of projecting and sustaining U.S. forces in “distant anti-access” environments. Accomplishing this critical operational goal requires a broad range of capabilities, and the naval capabilities required are best provided by a “family of ships.” Although warships are multi-mission by necessity, each member of the family of ships is optimized to perform a key function: DD(X) for delivery of precision strike and volume fires to support assured access and maneuver warfare; CG(X) to create and maintain air superiority over the joint force at sea and on land; and LCS to operate closer to shore to deny the enemy the use of anti-access weapons such as mines and submarines against our forces.

The fiscal year 2004 budget request includes funding for DD(X) and LCS. CG(X) development will begin in the future, and, as a descendant of the DD(X) program, it will share with DD(X) a common, more stealthy hull form and propulsion architecture. That architecture includes an integrated all-electric power system that is more efficient and survivable than today’s ships’, and provides more power capacity for future weapons. DD(X) and CG(X) will also use many of the same transformational technologies to reduce crew size and operating and support costs.

• *DD(X).* The DD(X) advanced multi-mission destroyer is the centerpiece of our future surface combatant “family of ships.” It will bring revolutionary improvements to precision strike and joint fires. The fiscal year 2004 budget request includes R&D funding of more than \$1 billion for design, development, and testing leading to procurement of the lead ship in fiscal year 2005. This investment is vital and it is the most critical component for the shipbuilding technology base of the future. Transformational and leap ahead technologies include an integrated power system and electric drive; the Advanced Gun System with high rate of fire and magazine capability; the new Multi-Function Radar/Volume Search Radar suite; optimal manning through advanced system automation, stealth through reduced acoustic, magnetic, IR, and radar cross-section signature; and enhanced survivability through automated damage control and fire protection systems. Unless we systematically reduce the crew size of our future ships, we can't get to the future. DD(X) leads the way. Armed with an array of land attack weapons it will provide persistent, distributed offensive fires in support of joint forces ashore, including our number one joint partner, the United States Marine Corps. The capacity in both hull form and integrated electric power system will allow us to spiral its development to CG(X), a critical future component of sea based missile defense.

• *Littoral Combat Ship (LCS).* The Chief of Naval Operation's number one budget priority, the LCS is the next member of our surface combatant “family of ships.” The fiscal year 2004 budget includes \$158 million to accelerate development and construction of nine LCS in the FYDP, key to ramping surface force structure to global CONOPs levels outside the FYDP. It will be the first Navy ship to separate capability from hull form and provide a robust, affordable, focused-mission warship to enhance our ability to establish sea superiority. A networked, lethal, small, fast, stealthy, and highly maneuverable ship, LCS will be designed from the keel up as a focused mission ship capable of employing manned and unmanned mission modules to counter some of the most challenging anti-access threats our naval forces may encounter close to shore—mines, quiet diesel submarines and small, fast, armed boats.

Mission module development will focus on identifying and integrating systems with technical maturity that will provide proven warfighting capability for the first flight LCS. These potentially include off board systems that will increase LCS sensor and weapons reach such as Vertical Takeoff UAV, Remote Minehunting System, Spartan Scout ACTD, Long-term Mine Reconnaissance System and Advanced Deployable System. Integration of these systems, in addition to the installed core systems, will provide LCS combat capability in the focused mission areas of Mine Warfare, Anti-Submarine Warfare, and Anti-Surface Warfare. Through the spiral development process, we will combine improved legacy systems and next generation systems to provide ever-increasing capability for follow on LCS flights.

Last year, we continued experimenting with a range of innovative hull forms, and Congress supported us so we could get the program moving this year, avoiding a critical 1-year delay. The fiscal year 2004 effort will be aimed at defining requirements, improving our knowledge base for selecting an LCS design, and beginning mission module development. We will capitalize on DOD initiatives, spiral development, and new acquisition methods to streamline the acquisition process, and begin construction of the first LCS by 2005.

• *CG Conversion.* The fiscal year 2004 budget includes \$194 million for the first Cruiser Conversion. The Cruiser Conversion Program is a mid-life upgrade for our existing AEGIS cruisers that will ensure modern, relevant combat capability well into this century and against evolving threats. These warships will provide enhanced land attack and area air defense to the Joint Force Commander. Core to these conversions is installation of the Cooperative Engagement Capability, which enhances and leverages the air defense capability of these ships, and the 5"/62 Gun System with Extended Range Guided Munitions to be used in support of the Marine Corps Ship-to-Objective-Maneuver doctrine. These converted cruisers will also be available for integration into ballistic missile defense missions as that capability matures.

• *DDG-51.* Three *Arleigh Burke* class (DDG-51) destroyers are being procured in fiscal year 2004 with the \$3.2 billion requested as part of the MYP of 10 DDG-51 ships over the period fiscal year 2002 through fiscal year 2005. The Navy and its two principal DDG builders successfully negotiated a workload swap arrangement in June 2002 in which General Dynamics' Bath Iron Works will transfer LPD-17 ship construction work to Northrup Grumman Ship Systems in exchange for additional DDG-51 work. This arrangement will optimize production efficiencies and stabilize workload at all shipyards building DDG-51 and LPD-17 class ships.

Amphibious Ships

- *LPD-17*. The fiscal year 2004 budget provides full funding of \$1.2 billion to procure the sixth ship of this planned 12-ship class. LPD-17 functionally replaces LPD 4, LSD 36, LKA 113, and LST 1179 classes of amphibious ships for embarking, transporting, and landing elements of a Marine landing force in an assault by helicopters, MV-22s, landing craft, and amphibious vehicles. This program is on track and represents a critical contribution to the Marine Corps' amphibious lift requirements.

- *LHD-8*. The fiscal year 2004 budget requests \$355 million additional incremental funding for LHD-8, a modified repeat of previous LHDs. LHD-8, with introduction of gas turbine propulsion, all-electric auxiliaries, and a new electrical distribution and computer based Machinery Control System will replace one of the aging *Tarawa* (LHA) class ships in 2007.

- *LHA Replacement (LHA(R))*. LHA(R) is a spiral development ship construction program designed to field a far more capable replacement (in conjunction with LHD 8) for the five *Tarawa* class ships that begin reaching end of service life in 2011. LHA(R) will provide a longer and wider platform capable of increased vehicle lift, and will have better survivability and weight margin. The fiscal year 2004 budget request of \$65 million provides funds for R&D supporting fiscal year 2007 procurement of the lead ship.

While we are building LPD-17 and replacements for the *Tarawa* class ships, it is important that we have a robust sustainment program for the amphibious ships currently in the fleet. The LPD-4 Class Extended Sustainment program, started in fiscal year 2003, will be completed on 6 of the 11 aging ships by fiscal year 2006 and addresses maintenance and operational readiness concerns. It is not designed to provide additional capabilities or combat systems enhancements. Average cost is \$73 million per hull based on existing configurations. These ships will ultimately be relieved by the last six LPD-17s by 2015 at an average age of 41.5 years. The LHA-1 Midlife program completes in fiscal year 2008 and will ensure that maintenance and readiness concerns are addressed. The LHAs do not have future growth for JSF or significant weight additions as the limiting draft at full load has been reached. The first LHA is scheduled to be replaced by LHD-8 in fiscal year 2007 and the last hull will be relieved in fiscal year 2022 by the LHA(R)s with an average class age of about 40 years.

Aircraft Carriers

- *CVN-21*. We are fulfilling the President's stated goal to "skip a generation" of technology and have accelerated transformational technologies from the CVNX development plan into CVN-21. The fiscal year 2004 budget request provides \$1.5 billion in RDT&E and advanced procurement for the first CVN-21 and programs for split-funded construction beginning in fiscal year 2007. The transformational technologies include a new electrical generation and distribution system providing a 300-percent increase in available electrical power, improved flight deck design with Electro-Magnetic Aircraft Launching System and Advanced Arresting Gear, improved sortie generation, enhanced survivability, reduced manning, and incorporation of a flexible infrastructure that will allow the insertion of new capabilities as they evolve. CVN-21 will be the centerpiece of our future carrier strike capability when it enters active service in 2014.

Submarines

- *Virginia-class submarine (SSN 774)*. The first ship of this class will deliver in June 2004. This class will supplement *Los Angeles*-class (SSN 688) attack submarines and improve submarine force capability for multi-mission littoral operations including ISR, special operations, mine warfare, conventional strike anti-submarine, and anti-surface missions. The *Virginia* class is designed to accommodate new technologies, including an array of unmanned vehicles and will be an integral part of our joint, networked, dispersed fleet of the 21st century. The fiscal year 2004 budget request of \$2.5 billion includes funding for Economic Order Quantity supporting plans for a MYP contract.

- *SSGN Conversions*. We have requested two additional conversions in fiscal year 2004; these ships will be configured to carry more than 150 Tomahawk missiles, enabling covert, large-volume strike. The SSGN will also have the capability to support Special Operations Forces for an extended period, providing clandestine insertion and retrieval by lockout chamber, dry deck shelters or the Advanced Seal Delivery System, and they will be arrayed with a variety of unmanned systems to enhance the Joint Force Commander's knowledge of the battlespace. We will leverage the existing *Trident* submarine infrastructure to optimize their on-station time. The first two ships, the U.S.S. *Ohio* and U.S.S. *Florida*, begin refueling overhaul this

year, *Ohio* in Puget Sound Naval Shipyard and *Florida* in Norfolk Naval Shipyard. U.S.S. *Michigan* and U.S.S. *Georgia* will begin their conversion in fiscal year 2004, and we expect this capability to be operational for the first SSGN in fiscal year 2007. But we are already experimenting with the capabilities this new ship will offer.

The recent Sea Trial experiment, "Giant Shadow," explored how a network of forces, including special warfare forces, and various unmanned aerial, underwater and ground vehicles and sensors could be used to provide surveillance, collect real-time intelligence, and develop and launch a time critical strike in support of the Joint Force Commander. This included the first vertical launch of a UUV, testing of nuclear-biological-chemical sensors, and the insertion of SEALs from one of the submarines we will convert to an SSGN.

In conjunction with Giant Shadow, the U.S.S. *Florida* successfully launched two Tomahawk missiles, confirming the ability to launch a Tomahawk from a configuration similar to the tightly packed cluster of Tomahawk All-Up-Rounds (AUR) we will use in the SSGN.

Maritime Pre-positioning Forces

- *Maritime Pre-positioning Force Future (MPF(F))*. The fiscal year 2004 budget request includes \$4 million in preliminary R&D funding for MPF(F) leading to procurement of the first ship in fiscal year 2008. MPF(F) ships will serve a broader operational function than current pre-positioned ships, creating greatly expanded operational flexibility and effectiveness. We envision a force of ships that will enhance the responsiveness of the joint team by the phased at-sea assembly of the sea-based echelon of a Marine Expeditionary Brigade. These ships will off-load forces, weapons, and supplies selectively while remaining far over the horizon, and they will reconstitute ground maneuver forces aboard ship after completing assaults deep inland. They will sustain in-theater logistics, command and control, and medical capabilities for the joint force for extended periods as well.

Combat Logistics Force Ships

- *Lewis and Clark Class Auxiliary Dry Cargo Ammunition Ship (T-AKE)*. The widely dispersed nature of future operations and the growing emphasis on sea-basing of joint capabilities will be supported by newer, more capable additional combat logistics force ships such as the T-AKE Cargo and Ammunition Combat Support supply ships. The fiscal year 2004 funding of \$722 million procures the fifth and sixth ships of the class to continue recapitalization of our support fleet. Delivery of the lead ship is expected in 2005. These ships will be crewed by Military Sealift Command (MSC) civilian mariners and constructed to meet ABS class/USCG certification. Enhanced capabilities in these ships will include greater capacities and upgraded material handling and transfer systems over the aging T-AFS and T-AE class ships being phased out. The T-AKE class will be built with multipurpose convertible cargo holds for dry stores and/or ammunition that will provide greater flexibility to tailor loads to meet changing operational requirements. A 12,000-pound Heavy UNREP system will double both delivery load weight and throughput rates of transfer, as well as increase the safe operating separation of the ships conducting replenishment. An innovative electric drive propulsion system will provide increased electric power for auxiliary power needs.

Science and Technology

Our science and technology (S&T) investment of \$1.6 billion in fiscal year 2004 continues to focus on maintaining a broad S&T base. The S&T program seeks to inspire and guide innovation that will provide technology-based options for future Navy and Marine Corps capabilities. It addresses areas from oceanography, advanced materials, sensors, and robotics; from biomedical science and technology; from electronics, surveillance, and neurotechnology and information science; from advanced combat systems to other technologies for ships, submarines, aircraft, and ground vehicles; and from concept-based experimentation conducted to enhance warfighting excellence. Our S&T drawing board includes projects related to next generation surface ships; unmanned aerial vehicles; underwater weapons; and, combat casualty treatment. Approximately 10 percent of the DoN S&T investment is budgeted for U.S. Joint Forces Command experimentation requirements.

The fiscal year 2004 budget request devotes a significant amount of resources toward four critical areas: Anti-submarine Warfare, Mine Warfare, Ship Self Defense, and Air and Missile Defense; to assure access in the future.

Anti-Submarine Warfare (ASW)

The fiscal year 2004 budget request supports improvements in ASW. The Improved Extended Echo-Ranging is incorporated into the USQ-78B Acoustic Proc-

essor, which will improve large area acoustic search capability on our Maritime Patrol Aircraft. Initial testing of the SURTASS Low Frequency Active (LFA) in the Western Pacific has demonstrated detection capability that provides us added assurance that we can deal with the diesel-electric threat as it becomes even quieter, and we have accelerated development of an Advanced Deployable System (ADS) off-board sensor variant, to start in fiscal year 2005, that will eliminate the requirement to cable the system to a shore site. The fiscal year 2004 budget also supports a fiscal year 2006 IOC of Mk 48 Mod 7 Common Broadband Acoustic Sonar System (CBASS) Heavyweight Torpedo specifically designed for use against advanced diesel submarines employing countermeasures in the difficult littoral environment. The MH-60R helicopter with its Advanced Low Frequency Sonar will provide an improved capability against submarines in the littorals. Acquiring the airborne Automatic Periscope Detection and Discrimination system will provide further enhancements to our capability for large area search. Additionally, the capability for our surface combatants to survive attacks from threat torpedoes will be enhanced through the Surface Ship Torpedo Defense system. The success of the truly open architecture Acoustic Rapid COTS Insertion (A-RCI) program in providing significant improvement in ASW sensor processing for our submarine force has spawned similar efforts in submarine combat control, communications, and upgrades to the surface fleet's SQQ-89 combat suite. These programs validate the Navy's decision to use commercially available technology to deliver superior performance at less cost.

Mine Warfare (MIW)

The fiscal year 2004 budget continues the development and acquisition of the Long-Term Mine Reconnaissance System (LMRS), which is on track for a fiscal year 2005 IOC on the *Los Angeles* class and will be incorporated on the *Virginia* class as it delivers. LMRS will provide a clandestine reconnaissance capability for mines and mine-like objects. The fiscal year 2004 budget also includes funding for the development and acquisition of the Remote Mine-hunting System (RMS), a surface ship-launched and recovered semi-submersible vehicle. RMS has a fiscal year 2005 IOC with near-term fielding planned for DDGs 91-96. RMS also is a strong candidate for future deployment on the LCS. To meet the Department's goal of an organic mine warfare capability by fiscal year 2005, the fiscal year 2004 budget continues the development and integration of five Organic Mine Subsystems into the MH-60S platform.

The MH-60S "Knighthawk", the Navy's newest Multi-Mission Combat Helicopter, has been identified as one of the two platforms that enable the Naval Helicopter Concept of Operations for the 21st century. Partnered with the MH-60R, the MH-60S will enable maximum combat efficiency across a spectrum of warfighting tasks centered on the Armed Helicopter and Airborne Mine Countermeasures configurations. These missions place great reliance on the lethality of weapons systems brought to bear on a threat to our Nation's access to littoral waters. Through enhanced lethality of helicopter borne weapons systems, an asymmetric disruption of naval operations can be thwarted without the use of fixed wing based aircraft or the air combat element of the Marine Expeditionary Unit. In addition to operating from today's current inventory of combatant ships, the MH-60S will interface with the Maritime Pre-positioning ship of the future (MPF), the LCS, and the High Speed Vessel (HSV). As we develop these platforms and concepts, the MH-60S will be tailored, through spiral acquisition, to meet the capabilities required of the Joint Theater Commander. The fiscal year 2004 budget includes \$431 million for 13 helicopters and other equipment required to transition to the new airframe.

Ship Self-Defense

We continue to invest in upgrading our Ship Self-Defense programs. Fiscal year 2004 funding covers the spectrum from electronic countermeasures to missiles to guns. The SEWIP is a spiral development effort initiated to provide a robust, full spectrum electronic warfare system following cancellation of the Advanced Integrated Electronic Warfare System in fiscal year 2002. SEWIP will build on the legacy SLQ-32 system to field capabilities against next-generation threats. The current budget expands procurement of the Close-in Weapons System, Block 1B. The internationally procured Rolling Air Frame Missile and the NATO Evolved Sea Sparrow Missile will provide ship self-defense against anti-ship cruise missiles as part of a layered defense. Additionally, we are pursuing installation of minor caliber guns on our deploying ships to improve our ability to counteract a small boat threat in the 0 to 8,000 yards range. We soon will install stabilized minor caliber guns on two DDGs. Additionally, arming MH-60R and MH-60S helicopters that deploy on surface combatants provides an addition layer of lethality against a small boat attack.

Air and Missile Defense

Our Navy is poised to contribute significantly in fielding initial sea-based missile defense capabilities to meet the near-term ballistic missile threat to our homeland, our deployed forces, and our friends and allies and we are working closely with the Missile Defense Agency (MDA) to that end. U.S.S. *Lake Erie* will be transferred to MDA to facilitate a more robust testing program for missile defense. In turn, MDA is requesting funds to upgrade three AEGIS guided missile destroyers (DDG) for ICBM surveillance and tracking duties and procurement of up to 20 standard missile interceptors to help us provide a limited at sea capability to intercept short- and medium-range ballistic missiles in the boost and ascent phases of flight. Our sea-based missile defense programs experienced tremendous success on the test range during 2002, and we look forward to building on these successes and developing a vital capability for our Nation.

The fiscal year 2004 budget requests \$35 million to develop the Extended Range Active Missile (ERAM). ERAM will enable over-the-horizon engagements against the most advanced anti-ship and land attack cruise missiles, and represents an important step in projecting area defense landward from the sea.

The fiscal year 2004 budget also includes \$29.7 million to begin in earnest the conversion of the Aegis combat systems to an open architecture (OA) design. In fiscal year 2004, we will begin the development of standards and functional architecture, building the Engineering Design Model of the computing environment, and validation and testing of common applications with the eventual goal of migrating legacy and new systems to OA condition. Based on mainstream commercial off-the-shelf (COTS) technologies and systems, converting to OA can avoid the high cost of maintaining and upgrading multiple legacy computing systems that quickly become obsolete and are not responsive to changes in warfighting requirements. Legacy computing systems have reached the upper bounds of processing capability and will be unable to accomplish the processing required for near-term and future complex missions, including BMD. With a COTS-based architecture, there will be minimal system changes as either warfare requirements or underlying commercial computing technologies change over the life of a platform.

Precision-Guided Munitions

Precision-guided munitions receive continued investment in our fiscal year 2004 request with emphasis on increasing our inventory levels. Joint Direct Attack Munition (JDAM) production rate has been tripled with \$277 million requested for procurement of 12,300 Navy JDAM kits in fiscal year 2004 and \$139 million was requested for 429 Joint Stand-Off Weapons. Laser Guided Bomb (LGB) kit procurement will continue with 5,000 to 6,000 LGB kits planned each year from fiscal year 2004 to 2006. We are also commencing full rate production under a proposed multiyear procurement for the Tactical Tomahawk (TACTOM) missile with 267 missiles requested in fiscal year 2004. Our partnership with the Air Force in several of our munitions programs will continue to help us optimize both our inventories and our research and development investment.

Employment of PGMs from aircraft requires precision targeting information, and the budget request includes funding for two noteworthy systems in this regard. First, the Multifunctional Information Distribution System (MIDS) provides secure, jam-resistant, high-throughput digital data link for voice and data to F/A-18 aircraft. It supports positive identification, precise location, situational awareness, sensor-to-shooter coordination, and reduction of fratricide between U.S. and allied aircraft, maritime and ground forces. This system is included in F/A-18E/Fs and a retrofit item for F/A-18C/D aircraft. The MIDS system is currently deployed with two Super Hornet squadrons aboard U.S.S. *Nimitz*.

Second, the active Electronically Scanned Array Radar system to be installed on naval tactical aircraft dramatically improves lethality in both air-to-air and air-to-ground scenarios. It has three times greater air-to-air target detection capability and optimized air-to-ground modes for multi-target identification. The fiscal year 2004 budget request of \$117 million supports a system IOC in fiscal year 2006.

FORCEnet is the enabler of the foregoing capabilities, and the operational construct and architectural framework for naval warfare in the joint, information age. It will allow systems, functions, and missions to be aligned to transform situational awareness, enable rapid mission planning, accelerate speed of decisions, and allow naval forces to greatly distribute its combat power in the unified, joint battlespace. It puts the theory of network centric warfare into practice. Programs that will enable the future force to be more networked, highly adaptive, human-centric, integrated, and enhance speed of command include:

- *Cooperative Engagement Capability.* The fiscal year 2004 budget request includes \$160 million for Cooperative Engagement Capability (CEC). CEC provides a

significant step forward in transforming our situational awareness of the battle space. This transformational program allows one ship to shoot a weapon at a generated target based on another ship's firing solution for the first time in naval history. The first squadron of CEC equipped E-2C Hawkeyes is currently deployed with the Nimitz Battle Group. The new variant of CEC that will be competed this summer is a next generation design that will be smaller, more affordable, and more bandwidth efficient while providing significantly higher performance and potentially supporting joint service use.

• *E-2C Advanced Hawkeye Radar Modernization Program.* E-2 Advanced Hawkeye (AHE) program will modernize the E-2 weapons system by replacing the current radar and other aircraft system components to improve nearly every facet of tactical air operations. The modernized weapons system will be designed to maintain open ocean capability while adding transformational surveillance and Theater Air and Missile Defense capabilities against emerging air threats in the high clutter and jamming environment. The advanced Hawkeye will be a critical contributor to Naval Integrated Fire Control-Counter Air, and to Sea Strike and Shield. The fiscal year 2004 budgets over \$350 million for continued development with first production planned for fiscal year 2008.

Combining the capabilities of CEC on Aegis ships and E-2C Advanced Hawkeye aircraft with the ERAM described earlier creates a capability package called Navy Integrated Fire Control-Counter Air (NIFC-CA). The over-the-horizon air directed surface-to-air missile capability against challenging targets that NIFC-CA will provide will dramatically improve the joint air defense capability.

• *Unmanned Air Vehicles (UAV).* We increased our commitment to a focused array of unmanned air vehicles that will support and enhance all missions with persistent, distributed, netted sensors. We are initiating the Broad Area Maritime Surveillance (BAMS) UAV this year to develop a persistent, multi-mission platform capable of surveillance and reconnaissance of maritime and land targets, communications relay and some intelligence collection. Additionally, we have requested funding for development, testing, and experimentation of Fire Scout, a Global Hawk Maritime demonstration, and an Unmanned Combat Aerial Vehicle—Navy (UCAV-N) demonstration vehicle.

• *Joint Fires Network.* A further step forward in Network-Centric Warfare and one of the Navy's transformational initiatives is the Joint Fires Network (JFN). The JFN integrates the best elements of three existing systems, Global Command and Control System-Maritime (GCCS-M); Joint Service Imagery Processing System-Navy (JSIPS-N); and Tactical Exploitation System-Navy (TES-N), into a converged joint architecture. JFN automates, coordinates, and correlates the processing of multiple tactical data streams from various intelligence, surveillance, and reconnaissance (ISR) sources to provide time critical fire control solutions for advanced weapon systems. JFN provides the maritime and joint tactical commander the ability to quickly target and re-target precision weapons, enhancing their overall effectiveness and lethality. JFN supports Sea Strike and Sea Basing by reducing the sensor to shooter timeline from hours to minutes; providing precision targeting data for coastal and deep fire support; and the use of ISR data from responsive and persistent ISR assets to improve both the Common Operational Picture and Intelligence Preparation of the battlespace. The fiscal year 2004 budget includes \$159 million for JFN. JFN will serve as a critical building block for the FORCEnet concept.

V. CONCLUSION

With your help, we are significantly improving our Navy. We will continue our culture of readiness and our commitment to developing our people while we recapitalize and transform our force. Your future Navy will be joint, dispersed, and netted, and we will accomplish this improvement in warfighting capability while still pursuing those efficiencies that make us good stewards of the public's funds. The Chief of Naval Operations has made it plain that mission accomplishment means both warfighting effectiveness and resourcefulness.

The fiscal year 2004 budget request reflects these priorities. It focuses on the right thing—ensuring future naval combat readiness. To recapitalize, we need to sustain the MYP of DDG-51 class destroyers and initiate MYP for *Virginia* class submarines. To transform to meet future threats, we need to keep DD(X) on track, move ahead on LCS and LCS mission modules, execute the CVN-21 acquisition strategy and complete the development of SSGN. Also, we must define the right mix of Expeditionary Warfare ships. We thank the committee for your continued strong support of our Navy, our sailors, and our civilian shipmates. Working together, we are confident we will make our great Navy even better.

Senator TALENT. Thank you, Admiral Mullen.

I see the Senator from Rhode Island has returned and I think that kind of faithfulness justifies immediate recognition, so I am going to recognize Senator Reed.

Senator REED. Am I being punished for being prompt, Mr. Chairman? No? Thank you very much for your courtesy.

Mr. Secretary and Admiral, thank you again for your testimony. Let me first begin by asking whether you can give me and the committee an update on the conversion program, the SSGN conversion program.

Secretary YOUNG. The SSGN conversion? The *Ohio* was inducted into Puget Sound Naval Shipyard on schedule and so the work on it is progressing in the very early phases, but going very well. The fiscal year 2004 budget requests the funds needed to execute the four-ship program less an amount we need to try to work, and we are working through, on a reprogramming right now. We have built a program structure that puts about 6 months stagger between each conversion and a strategy that uses Electric Boat as the overall conversion manager. This will allow them to gain some learning advantage by moving key people between those conversions.

So we have a very aggressive, as you well know, and fast-paced program, but we have been allowed to build a structure that tries to seek some learning curve benefit and opportunity for efficiency. So I am optimistic and we are off to a good start.

Senator REED. Great.

With respect to the amphibious forces, I understand that the model is a 12-ship amphibious ready group able to lift simultaneously 2½ MPDs?

Admiral MULLEN. Yes, sir. I think it is a very important question and important to reiterate the overall requirement. I talked about the 19 independent strike groups and the new global concept moving to 37. That is based on 12 carrier strike groups, 12 expeditionary strike groups, which would include the kind of amphibious capability we have today in our ARGs, in addition to additional surface combatants and submarines in order to give them some more punch and some more striking power, and that the requirement in particular for LPD-17 of 12 is still one we very strongly support.

Secretary YOUNG. That is, if I could?

Senator REED. Yes, sir.

Secretary YOUNG. The program that is laid in place. Albeit there is some slippage in the budget, and that is an issue we will take a look at. Building out those 12 LPDs efficiently is important both from an acquisition point of view and from the strike group point of view. This is because they replace ships that will be easily approaching or exceeding 40 years old by the time we get the LPDs out there.

Senator REED. Let me understand it, since I am more comfortable with tanks than ships. But we are building the eighth *Wasp*-class LHD, is that correct?

Admiral MULLEN. Yes, sir.

Senator REED. Then we have five *Tarawa*-class ships to comprise the ARG at the moment, is that correct?

Admiral MULLEN. Yes.

Senator REED. The five *Tarawa*-class ships are rather old, about 35 years or so, and there is an issue about how do we continue this

transition, particularly with the introduction of some of the Osprey aircraft, stability of the ships? Are those questions that you are considering?

Admiral MULLEN. Yes, sir.

Senator REED. As I understand it, there is a study going under way to try to determine how best to deal with this whole issue of reaching that 12-ship ARG. Can you talk about some of the options and your thinking at the moment about what should be done, building additional *Wasp*-class ships, designing a new ship, etcetera? Where are we in that process, Admiral?

Admiral MULLEN. I will certainly let Secretary Young talk about the acquisition side of this, but from the overall program standpoint and as we approach it, as LHD-8 comes in the first *Tarawa* will be retired, the intent is not to go above 12 in that regard.

In the 2007 column of the budget, we have a ship called LHAR, which is essentially put in there to start to address some of the issues you raise, in particular the flight deck space. So it is not an LHD-8. It will be LHD-8-like, except it will be both longer and it will have a plug in it which will allow us to accommodate that additional deck space, if you will.

We essentially started to put these ships out in 4- or 5-year increments to replace the first five as they reach their full service life. The next one to come after that is not in the budget right now. It is in the fiscal year 2010 timeframe. A lot of the both internal study and also the study to which I think you are referring, is this joint forcible entry study, in which we are participating to look at creating options. We have not gotten to the point, Senator Reed, where we have created the options yet. We are really at the point where we have blessed the scenarios because we have good data on four different scenarios.

The idea of that, though, is to run those scenarios from a warfighting standpoint and see what the needs are and see where those studies point us with respect to options in the future. That gets us to the warfighting capability that is going to be existent in the future expeditionary strike group when that fiscal year 2010 ship starts to take more form.

Senator REED. Thank you, Admiral.

Mr. Secretary, can you talk about the *Virginia*-class submarine program? You are asking, I think, this year for a multiyear procurement and frankly in order, from our perspective, to maintain the recommended number of submarines in the fleet we have to begin to be more aggressive in our procurement. That is the point I begin with.

But can you talk about the multiyear in terms of the cost profiles you are seeing right now in the multiyear?

Secretary YOUNG. I would say a couple things. The *Virginia*-class program, for one, has gone very well. I am sure you have monitored it very closely. The design is basically complete. The first submarine is 82 percent built, the second submarine, the SSN 775, is 71 percent done, and down the line. We have made excellent progress with the program.

In years past there was a decision both from an efficient way to build the submarine which allocated the work between the two yards and from an industrial base point of view to allocate the

work between the two shipyards. So it has been a very thin production base, but they have done a reasonable job.

I make that point to say a couple of things. One, I would tell you, going back several years when the program was set up, it was set up to leverage the SSN-21 *Seawolf* class. The design-build tools have come together very well and the schedules that were laid out as many as 10 years ago have been met to within months. The reactor core was within a month, the pressure hull was within 3 months. We have operated the turbine generators and the main engines 3 years prior to going to sea, and there is a land-based test site to test the combat system, which has been under way since 1996.

We have a lot of confidence to come to you with a multiyear. Then I would approach that from another side and say from an industrial base point of view and from a requirements point of view, we really need to build at least one submarine a year. Once you know you have to do that, the most efficient way to do that and the tool we need to try to get control of the annual escalation in material prices and labor prices is a multiyear. So we can lock in some stable agreements with our vendor base.

I really believe we need that multiyear tool. I think there is adequate progress to justify it. It is not the traditional scheme. You would probably like to have a delivered submarine, but the industrial base situation we live with and the need to stabilize that base and stabilize the prices, I think very much the two together, justify taking the risk and taking the step forward and executing a multiyear procurement.

Senator REED. So you see it from the standpoint of not only requirements, but efficiency?

Secretary YOUNG. Yes, sir, absolutely.

Senator REED. Thank you, Mr. Secretary.

Thank you, Admiral Mullen. Thank you very much.

Mr. Chairman, thanks.

Senator TALENT. I thank the Senator from Rhode Island. I am certainly also a supporter of multiyear funding and greatly admired the CNO's emphasis on stability in funding, and multiyear procurement is obviously one of the ways to achieve that.

I do not think, at the same time, that we can ignore some of the cost problems that we have had with the *Virginia*-class submarine. In view of that and the fact we do not have a submarine in the water yet, are you telling me you have confidence that the Title 10 criteria have been met for a multiyear?

Secretary YOUNG. I believe we have excellent design stability in the program. I believe we know what the program costs are and we are submitting a new acquisition program baseline that recognizes those costs. I think critical to controlling those costs and not having further growth is the multiyear procurement tool. So I believe the criteria can be met to justify authorization of the multiyear contract or authorization.

Senator TALENT. I am not saying you are wrong with that. I am just saying that, given the problems that we have had from a cost profile standpoint, it is going to require I think very active management, careful watching, because we do not want to be in a situation

where we discredit this important tool, multiyear funding, by not getting the costs under control.

I say this as a supporter of the program.

Secretary YOUNG. I think that is exactly true. Sir, to that point, we have also recently set up an executive committee almost like V-22 to go and implement some of those management discipline tools, maintain control of the configuration, ensure that progress is being made. Program decisions are elevated to the highest levels, so that you can indeed deliver to schedule and cost.

We are working to put in place those tools, because I could not agree more strongly with your comment. Multiyears have been a successful tool in building people's confidence in schedule and cost, and we need to preserve that.

Senator TALENT. To be fair, some of this cost overrun, as we all know, is not the shipbuilder's fault. There are mitigating factors here. It reminds me a little bit of when Bill Perry took the C-17 in hand and ended up with a great aircraft.

I wanted to make that point and I appreciate your comment on it. Admiral, if you have anything you want to say, feel free to jump in on that.

Admiral MULLEN. I just have to reinforce the comment you made about what the CNO has discussed. Stabilizing these two accounts, both the aircraft account and the shipbuilding account, is a very high priority for us. There are lots—over the years that has been a very difficult challenge because they are such big accounts and we have, many of us, myself included, have over the years had a habit of reaching in there to make other things balance and trying to figure it out later on.

We are working hard to turn that corner so that we leave those accounts alone. I have watched Secretary Young for the last year and a half and the senior Navy leadership really work hard to try to stabilize it, and in the long run I think that is really what is going to give us a healthy Navy in the future.

Senator TALENT. Yes, and I think we all have to just agree that we are going to forfeit that unbridled discretion to reach in those pots of money every year as the whim moves us. I am certainly willing to stand up for that here on the Hill. We just have to have active management of programs that have had some concerns.

I want to follow up on a question Senator Kennedy asked regarding the Advanced Gun System for the DD(X). The CNO said he was confident it would meet the Marine Corps' requirements for both rate and volume of fire, and I was pleased to hear that. Mr. Secretary, there is a reevaluation of the performance parameters for DD(X) under way now. Is that Advanced Gun System part of that reevaluation? Is it being considered for downsizing and, if so, how would that affect the Marine Corps' requirements that Senator Kennedy asked the CNO about?

Secretary YOUNG. I think to best answer the question, I would take a step back and say, that as we move forward this ship is very important to the Navy. It will be both the land attack destroyer fighting for the Navy out to the 2050 timeframe and then it is the platform that hopefully will enable CG(X), without significant additional investment other than the radars and sensors for it.

It is worth taking some time to look at the requirements and make sure we have them right. The Advanced Gun System you mentioned is a significant driver in the size of that ship. As you are even more familiar than I with airplanes, size, weight and cost tend to have a correlation. So it is worth taking some time and making sure we have the requirements right, because the fire support requirement is substantial.

Do we need to execute all of that requirement by having a very large magazine on the ship, because that and the guns drive the size of the ship. Or do we need a better resupply concept for that ship, so that we resupply it with rounds and there are two ships firing? So we are sitting down and looking at the operational doctrine, which brings the operational Navy to the table—looking at the acquisition side in terms of what we can do with the size and volume we have—and trying to make sure we also build a ship that is not exceedingly dense, because I think it is one of the cost factors in DDGs today, which is a smaller, but a very dense ship, which drives an intensity, if you will, into increased labor and the cost of the ship.

Therefore, we are taking another look at both the requirements side and then what the acquisition side can deliver to make sure we have it right as we get ready to move to the next important step of designing and locking the ship.

Senator TALENT. Is it fair to say then that in this reevaluation you are looking at the Advanced Gun System, being open-minded about it, if you will, in no way retreating, though, from the need to meet the Marines' requirement for naval gun support?

Secretary YOUNG. I believe that is exactly true, the right way to say it. In fact, I hesitate to elaborate, but we want to make sure we have the rate of fire right as well as the weight of the projectile right. So it is a full-spectrum look. Are we going to put enough warhead on the target? It is clear that ERGM and the 5-inch 62 caliber gun take a step in that direction. That step—we are revalidating—is still not quite enough and people are growingly convinced that you have to have the Advanced Gun System and proceed with that.

We need this work also to inform us about what we would expect from a rail gun, because that may be a future tool to get even more range and a higher rate of fire. I believe it is worthwhile. We owe it to you to make sure we have relooked all the system choices and we feel confident about the path that is going to be both the path to AGS and then an element of this will be the path to the future in terms of rail gun and what technology investments we make in S&T.

Senator TALENT. Admiral, Tomahawk missile inventory. I know the inventory is low and needs to be resupplied. You seem to be committed to doing that through block 4 procurement rather than conversion of the older variants. Do I have that right and do you want to comment on that?

Admiral MULLEN. Yes, sir. I have said, and I have been involved in the Tomahawk business for a few years, that the inventory, while it has recently increased because of in great part tremendous support here on the Hill is fragile.

We are in the second big remanufacture effort right now to remanufacture older missiles into what we call block 3 missiles as we speak. Where the CNO is on this, and Secretary Young and I have discussed this at reasonable length and the CNO talked about it in his testimony, is we really believe we need to move forward, do the block 4 Tactical Tomahawk, bring that to bear. One of the great success stories in my view of Tomahawk has been over the years a pretty rigorous testing system. We have rung that missile out with a very healthy test program, so we need to honor the law and the needs of the acquisition system to bring the new missile through that.

The remaining missiles that we have to remanufacture are exorbitantly expensive to do so, at the estimate is \$1.6-\$1.7 million a missile. So it is our conviction we need to move forward, not go back to that last group of missiles, which are very old and basically just shells that we would have to make new missiles out of.

We would like to ramp up—and I think Secretary Young can speak to the details of this—as early as we can, as quickly as we can, from a capacity of on the order of about 38 a month to 50 a month and make the acquisition strategy work. Once we have reached, as the CNO said, full rate production, buy as many as we can.

Secretary YOUNG. If I could, Mr. Chairman, I believe Admiral Mullen said it exactly right. Because of the condition of the missiles that remain to be remanufactured and because to do the remanufactures that have been done to date efficiently we bought out some of the parts, therefore we would have to go back and requalify sources and do some re-engineering on pieces of it. So the best you do is get additional remanufactured missiles out of this group at a fairly high price and 24 months from now you can, for significantly less money, over the same time frame of getting about 300 more remanufactured missiles, get 300 Tactical Tomahawk on close to the same schedule, maybe not quite as fast, but close, or even closer if we are willing to take some risk in this area. This is an area where, because of the war, we may want to take some risk and buy Tactical Tomahawks.

The three tests have gone almost flawlessly to date and all the basic parameters have been demonstrated. This is not a brand new system where we are re-inventing the wheel. This is a system where we are re-engineering the parts to bring the cost down and doing so very well. The new Tactical Tomahawks are going to be on the order of \$569,000 a copy. That is the promise.

So we would like to work aggressively to step up that production rate faster and to a higher level as soon as possible as the most efficient way to get more missiles and replace the fact that we have burned through the inventory here.

Senator TALENT. You have mentioned several times, this constant emphasis, which I really appreciate, on rolling up your sleeves and getting involved in the details of these programs, discovering efficiencies, making dollars go further, and making the tough choices. I appreciate what you have done working with our partners in the shipyards to begin revising those manufacturing processes so they can get the same efficiencies.

I know that we have made progress in that area and I know that that is a result of a partnership, but a lot of it is the initiative that has come from your offices, and I want to compliment you on that.

Do you want to comment on how that is going? I mean, you have referred to it a little bit, but do you have any comments you want to make?

Secretary YOUNG. I appreciate the opportunity to say a couple of brief things. Again, some of it is because of my awareness of your background and what you have seen. The shipyards have been very aggressive in embracing lean manufacturing. You can go to Avondale and see what used to be a very messy workspace now efficiently lined up so the distance traveled by the workforce is minimized, and the tools are there for them to do the job. You see the same thing at Ingalls, and you see the same thing at Bath when you visit the shipyards.

Newport News has implemented an Enterprise Resource Program, which the Navy on its own is also trying to implement across our enterprise. So you manage your supply chain, you know when the parts are there, and they are properly scheduled for use. So I think your point is well taken.

The key step that we are enforcing is discipline in the design and manufacturing process. We have a fund. We are strictly controlling the design changes we want to implement in the ship, and letting the yard plan to build that ship in accordance with an approved configuration, and not create churn, because our accounting systems and budgeting process are not amenable to the delay and disruption that you inevitably put in when you decide to change something on the waterfront.

Those are the steps we have taken to stop generating prior year completion bills as well as be more efficient in our new build program. The shipyards are taking a lot of initiative on their own.

Senator TALENT. I ought to visit because it is exciting to watch as manufacturers do that. You are right, I do have some history of that with TACAIR, and I am certain that they are and I hope that they are inculcating that concept all the way through the workforce. In other words, a lot of this comes from the guys and gals on the line who are doing this work. Once they get that sense that the top leadership is committed to the updating and this lean manufacturing, it is amazing what they will come up with. It might be a good opportunity or a good subject for me to visit.

Let me close with how I started to get your comments on how LCS is doing and particularly the modules. You were here when I asked the CNO about this. I really support this idea and I have caught his vision, and your vision for this. First of all, the whole concept is ambitious. You have a frame of a ship and then you are going to put modules in it and pull them out as you change the mission for that particular ship. Mr. Secretary, and then maybe Admiral Mullen, if you would comment on if you have had any estimate of costs or range of costs for the modules that you have available at this time?

Secretary YOUNG. I think that last discussion is important. When we make decisions to change a combat system or other equipment, a lot of times you have to go into the ship and the yard or on the waterfront and change the foundations and other things to land it.

So to give credit, I think Secretary England and I talked through some of this in the beginning with the CNO and he brought his vision to bear.

But I hope that sea frame is something like this room, where there are throughout the room regular drops for power, communications, cooling, and the things you need, so that you see this in today's ships. You go on a DDG, you will see a lot of laptops that have been brought on board. I believe we can, in the future, bring the combat system aboard as laptops and test it at a land-based site and implement it on that.

So we need most importantly to have a sea frame that has space and it has ride qualities so that in this littoral environment the sailors are comfortable performing their mission. We need to focus on getting a ship that is about the right size. Given we know, as the CNO said, we want RMS on board and a certain amount of air defense capability. We can roughly allocate those budgets, if you will, to the ship, focus on getting the hull right so we can get the speed and the stability we need, and then make sure the combat systems going forward try to conform to that space, hopefully to have more than enough margin so we have some growth margin.

The same thing was done in F/A-18E/F. You built a big enough airframe to have margin space to bring additional combat systems on board. We will try to put some margin in that sea frame so we do not find ourselves constrained in that regard.

Admiral MULLEN. Sir, a couple of recent data points that I think are really important. This is a warship and we talk about it in a lot of terms. But the CNO first and foremost reminds us that this is a warship we are fielding to be able to get in the ring and stay in the ring, win while we are there, and do some missions that are very challenging for us right now such as in the mine warfare area, the diesel submarine area, as well as the surface ship defense or both attack and defense, if you will, where other ships cannot go because we do not have them in numbers or we are restricted to get them in that close in certain environments.

The issue of modularity has come up and what does that mean. I think this is a part of the CNO's vision as well as how both Secretary England and Secretary Young talk about this. The CNO was overseas in a European country not too long ago that has a small navy and he watched inside 15 minutes a 76-millimeter gun, which is the same size gun we have on our Guided-Missile Frigates (FFGs), essentially from the time the clock started until it was doing firing checks was about 15 minutes, from being on the pier to putting it on the ship.

Now, to me that concept or that modularity with a very capable gun, if you will, or whatever we are going to bring in these modules is really what we are after, to be able to hook up into the capability, water, air, heat, power, those things, cooling, that Secretary Young mentioned a second ago.

So we are excited about it. It is moving quickly and certainly what he said is true. A year ago, we did not know enough to properly budget for the modules. The way we answer that is to take some of the off-the-shelf stuff—he used the example of several RMSs in the mine warfare area on an LCS, for example. There are other off-the-shelf technologies that would go to the first two.

Not unlike moving it quickly with the money we have in it this year, which we got great help over here for, we need to do the same thing in the modules, which is why we have asked for it in the unfunded program list. It really is risk reduction money to get us to what it is going to be in the 2007–2008 time frame.

Senator TALENT. That \$35 million is really pretty important to you?

Admiral MULLEN. Yes, sir, it is in that regard.

Senator TALENT. That is part of the record; I see this really as the crossroads of the whole Seapower 21 vision. One of the reasons I am asking so many questions about it is I have a feeling if I can understand it better then I am going to see the direction that you all are trying to go with this thing and we are going to make a lot of progress on this in the 2 years that I am chairing this subcommittee. So I want to really partner with you on it.

I interrupted you.

Admiral MULLEN. No, sir. That was essentially what I had to say.

Back to the land attack destroyer, one of the initiatives there, while it is the technology center for our R&D base for surface ships, which 3 or 4 years ago was virtually nonexistent, that is why that money that is over here right now in R&D on DD(X) is so important to us, because clearly it is going to develop the DD(X) technologies. But it will spin to LCS and CG(X). In my view, if we do it right, it will spin to just about any seagoing vessel, submarine, or aircraft carrier that we build. That is one piece, the volume of fires and precision that the CNO talked about, which is critical. In the armored world, the 155-round is what does it. The 5-inch round that we have right now as we explore this over time is not the one that was able to answer the mail, even with the increased precision that clearly the technology brings now.

The other piece of that is DD(X) is going to be manned with a very small number, a third of the crew typically that we have had on a destroyer, and that has forced a major investment in technology, if you will, to support that. That will spin off to LCS so it will be properly manned at a very small number, we think. We do not know what that number is yet.

The whole idea is we want the cost of both the modules and the ship to be absolute minimum. It cannot approach the billion dollars a year we are talking about right now in DDGs, for instance. It has to be well below half of that in my view.

Senator TALENT. Well, that is because this is how you are going to meet the need for surface combatant vessels, is it not?

Admiral MULLEN. Yes, sir, clearly.

Senator TALENT. I mean, I am really intrigued and attracted by the ambition of this and I do intend to follow it carefully with you and to be supportive of your efforts in it. You are right, a few years ago we would have said you are trying to square the circle, build a ship with multi-mission capabilities that you can easily and quickly modify to perform a number of different functions, fitting in with a Sea-Basing concept that you are also still developing, and doing all that at a rock bottom price. A few years ago I would have said you cannot do it, but I think you guys probably can do it.

Maybe that is a good note on which to end the hearing. Let me just make certain that I have not neglected to ask anything that people are panting to have me ask.

Thank you all for coming and we will adjourn the hearing.
[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR JAMES M. TALENT

BENEFITS OF "SEA-SWAP" EXPERIMENT

1. Senator TALENT. Admiral Clark, in your written statement, you note the Navy's Sea-Swap program and that benefits are being realized from this program. What are examples of these benefits?

Admiral CLARK. The intent of the Sea-Swap program is to improve the Navy's forward presence and employability without a corresponding increase in force structure. The Navy has two ships, U.S.S. *Fletcher* and U.S.S. *Higgins*, operating forward as part of the Sea-Swap initiative. By rotating crews to the ship rather than changing ships, *Fletcher* and *Higgins* are providing longer on-station times while maintaining our personnel tempo goals.

2. Senator TALENT. Admiral Clark, how do the benefits of the Sea-Swap program compare with the benefits of forward homeporting of Navy ships in foreign ports, such as Yokuska, Japan?

Admiral CLARK. Our forward deployed naval forces homeported in the Western Pacific, the Persian Gulf, and in the Mediterranean, allow us to respond rapidly to crises and provide theater security cooperation in that theater of operations. Strategic cooperation, particularly with the host nation, forward maintenance capability, and shortened lines of supply are all benefits of forward homeporting. Similarly, Sea-Swap attempts to improve our forward engagement, but without permanent basing in the forward theaters. The Sea-Swap initiative is starting out with two ships as a pilot program to measure and evaluate the benefits versus the costs of the program.

3. Senator TALENT. Admiral Clark, are Sea-Swap and forward homeporting programs mutually exclusive or is there a synergy between the two programs that realizes a larger benefit for the Navy? Please cite examples.

Admiral CLARK. Sea-Swap and forward homeporting are not mutually exclusive. Through both programs we are attempting to get a greater percentage of immediately employable, flexible naval forces forward. Our forward based ships operate predominately in the Western Pacific, while Sea-Swap ships are currently employed in the U.S. Central Command theater of operation. The benefits of forward homeporting ships are routinely demonstrated through operations and exercises with nations of the Western Pacific region and in their rapid response to the Persian Gulf during Operations Enduring Freedom and Iraqi Freedom. The Sea-Swap program is still in its infancy and we are in the process of evaluating its effectiveness.

QUESTIONS SUBMITTED BY SENATOR SUSAN M. COLLINS

MISSILE DEFENSE

4. Senator COLLINS. Admiral Clark, in your testimony, you mention the increasing role of the Navy in missile defense. You highlight the recent success that the Navy has had in testing, which included scoring three hits and conducting three successful tracking events. Certainly, that track record stands out among the family of missile defense systems being developed across the Department of Defense. I believe that the Navy will become an even larger player in missile defense in the coming years. Already, the Missile Defense Agency (MDA) is requesting funding to equip a number of DDGs for surveillance purposes. As more of the DDG-51 vessels are integrated into missile defense, it will add to the already considerable requirements we place on our destroyers. How do you envision the role of the surface fleet developing in missile defense and what are the possible implications for shipbuilding?

Admiral CLARK. We are working cooperatively with the MDA to evolve Navy's participation in ballistic missile defense (BMD). The plan to install surveillance and track capability in several DDGs by October 1, 2004 is the first operational effort toward this cooperation. We are working with MDA to improve on these capabilities through a spiral development plan culminating in a capability to provide Anti-Air Warfare and BMD capability in Aegis-equipped ships in the 2010+ timeframe. Cur-

rently, that effort is aimed at in-service ships, but we are also looking at options that have the potential for applications in new construction ships in the future.

DDG-51

5. Senator COLLINS. Admiral Clark, I want to thank you personally for your good work in putting together the fiscal year 2004 budget submission. In the past, you have made commitments to me that shipbuilding funds would be restored to a level that would help to put the Navy on the road to recapitalization. You have kept that commitment. However, there are still challenges ahead. In particular, I have concerns about the procurement of major surface combatants in the coming years. As it currently stands, the Navy will cease construction of DDG-51 destroyers after 2005, and only fund four DD(X) destroyers during the 2006 to 2008 timeframe. To sustain the industrial base, four vessels over a 3-year period is wholly inadequate. At the same time, the Navy will continue to be faced with increasing missions. In particular, it is becoming evident that major surface combatants will be playing a significant, and growing, role in missile defense. While this problem is still a few years off, it is critical that we begin to deal with it. Are you committed to addressing this issue?

Admiral CLARK. The Navy is committed to restoring shipbuilding funds to a level that will put us on the road to recapitalization as reflected in the fiscal year 2004 President's budget request. The Navy's ship recapitalization program and corresponding budget for fiscal year 2004 is "turning the corner" on previous budgets and will continue to increase across the Future Years Defense Program, ramping to levels needed to recapitalize the fleet to meet future warfighting requirements. In the near term, the recently awarded 10 ship DDG-51 multiyear contract and workload exchange agreement between Bath Iron Works and Northrop Grumman will optimize production efficiencies and help stabilize workload at both shipyards. To meet the needs of our future Navy, including missile defense, we must rapidly transition from legacy programs such as DDG-51 to transformational programs such as DD(X), Littoral Combat Ship, and CG(X).

6. Senator COLLINS. Admiral Clark, do you have any initial thoughts about major surface combatant construction in the coming years?

Admiral CLARK. In addition to completing procurement of 62 *Arleigh Burke* (DDG-51) class destroyers in fiscal year 2005, Navy is investing significant resources over the next several years to develop, design, and construct the LCS and DD(X), two of the three members of the surface combatant family of ships. Both the lead LCS and DD(X) are funded in RDT&E recognizing the managed risk associated with key systems included in these new start transformational shipbuilding programs.

In line with recent DOD initiatives to streamline the acquisition process, the Navy has placed LCS on a fast track to begin construction no later than fiscal year 2005. Starting the LCS program in fiscal year 2003 affords an opportunity to employ innovative spiral development and acquisition methods from the keel up. Collaboration between the Navy and the U.S. Coast Guard Deepwater program and with allied nations with experience in littoral operations will facilitate cost effective development and procurement of the LCS and its associated mission capability modules. The Cruiser Conversion Program will bring critical mid-life capability improvements to our first class of Aegis equipped ships.

The DD(X) research and development effort will enable the Navy to keep pace with today's rapid technological advances, spiraling promising technologies to both CG(X)—the third member of the family of ships—and LCS. It will also enable the Navy to upgrade in-service Aegis equipped cruisers and destroyers with selected leading edge technologies to maintain operational effectiveness of the legacy, multi-mission fleet.

U.S.S. JACKSONVILLE

7. Senator COLLINS. Admiral Clark, with a rapidly declining fleet, it is critical that the Navy take every opportunity to maximize the life of vessels that still can provide useful service. The Navy has recently provided Congress with its Fiscal Year 2004 Unfunded Priority List. On that list is funding that would provide for the refueling of SSN-699, the U.S.S. *Jacksonville*. This refueling would take place at Kittery-Portsmouth Naval Shipyard. In the past, I believe that the Navy has perhaps been too quick to decommission submarines, which has in part led to the decreased force structure we have today. What value would the U.S.S. *Jacksonville*

bring to the Navy should funding be made available to refuel it, as opposed to decommissioning the vessel?

Admiral CLARK. The expected warfighting benefit to be derived from the U.S.S. *Jacksonville* ERO in fiscal year 2004 is the availability of an additional SSN 688 class submarine raising SSN force level from 54 to 55 to meet minimum warfighting requirements.

The 2001 QDR sets the moderate risk SSN force level at 55. Similarly, the 1999 Chairman, Joint Chiefs of Staff Study reached the conclusion that below 55 SSNs leaves the Department with insufficient capability to respond to urgent critical demands without gapping other requirements of high national interest. Navy studies since 1999 have identified the warfighting requirement of SSNs as 55. Current SSN force level is 54 ships.

The investment in *Jacksonville*'s refueling will add 10 years of life and force structure to the force.

QUESTIONS SUBMITTED BY SENATOR EDWARD M. KENNEDY

EFFECT OF DECLINING FLEET SIZE

8. Senator KENNEDY. Admiral Clark, this budget includes cutting the Navy fleet size below 300 ships in fiscal year 2004. At a time when we are deploying the fleet more and asking our people to spend greater periods of time away from home, this would appear to be moving in the wrong direction. More specifically, the plan involves retiring the rest of the DD-963 destroyers early. What will be the effect on operating tempo for the remaining ships and crews in the surface combatant fleet?

Admiral CLARK. The Navy maintains a 2-year surface combatant deployment schedule. The current schedule keeps the surface combatant fleet within the CNO's operating tempo guidelines while allowing these reductions in fleet size. The Navy is committed to keeping deploying units within operating tempo guidelines.

9. Senator KENNEDY. Admiral Clark, aren't you, by the actions in this budget, asking Navy personnel to make even greater sacrifices?

Admiral CLARK. We constantly evaluate our manpower needs to ensure we have the right number of people, with the right training and the right experience levels, to man our ships, squadrons, and shore stations within established fiscal constraints.

The high-tech, inherently more capable, platforms we continue to integrate into the fleet in the 21st century present opportunities to accomplish more, without placing undue or unacceptable burdens on our men and women. The retirement of the DD-963 class will allow the recapitalization necessary to integrate less manpower intensive platforms that will have even greater warfighting capabilities. We are ever mindful of the effects on our sailors of excessive operational and personnel tempo. Accordingly, we continue in our efforts to ensure the pace of operations and time spent away from home are not adversely impacting their morale or their ability to perform in the same outstanding fashion we've observed since the onset of the global war on terrorism.

To be sure, a smaller Navy cannot be in as many places as a larger Navy. The Department must effectively manage operational tempo issues.

Considering all the issues, I believe retirement of the DD-963 destroyers is the correct course of action.

DD(X) CAPABILITY ALTERNATIVES AND EFFECTS ON FIRE SUPPORT CAPABILITY

10. Senator KENNEDY. Secretary Young, you mentioned during the hearing that the Navy is analyzing alternatives for the level of capabilities in the DD(X) program. I fear that this may be related to some arbitrary goal for the displacement of the ship. You also mentioned that you are considering alternatives involving rate-of-fire and the magazine volumes. The analytical efforts leading to this point in the DD(X) schedule, including all of the analysis done to support the original DD-21 program, determined that there were certain threshold capabilities for these two parameters.

Certainly, the Navy might be able to compensate for smaller magazine sizes by conducting more frequent underway replenishment operations, but this could include adding requirements for additional auxiliary ships. It would appear that the only way to compensate for a smaller rate-of-fire would be to increase the number of DD(X) destroyers or other vessels in the force supporting the same set of fire missions. Requiring more ships for the set of fire support missions could be a lot more

expensive than letting the analysis determine the size of the ship. Is someone setting some arbitrary goal for displacement of DD(X)?

Secretary YOUNG. No. The Navy is in the process of analyzing alternatives to meet requirements for: Marine Corps fire support, DD(X) multi-mission capability, and the projected CG(X). The analysis spans a range of threshold and objective values for various systems including trading requirements such as the number of guns, magazine volume, and number of VLS cells, against ship design features, including displacement. Considerations in this review include current and proposed operational concepts and employment options for DD(X) under Sea Power 21. The Navy would like to spiral CG(X) from the same hull built for DD(X). This would reduce nonrecurring engineering cost, life cycle cost, technical documentation, and provide a common hull for 40–50 ships of the DD(X) and CG(X) class.

11. Senator KENNEDY. Secretary Young, will any Navy review of alternatives to the previously-derived threshold requirements include assessing fully-ascribed costs such as: (1) needing to provide additional or different auxiliary ships; or (2) buying a larger number of DD(X) destroyers or other vessels to satisfy the set of required missions?

Secretary YOUNG. Although not specifically addressed in the ongoing review of alternatives for DD(X), the Navy is studying various force architectures including additional or different auxiliary ships and platforms to support the future logistics needs and Sea Basing concept of operations for the Navy and Joint Forces. Other studies, such as the recently completed Secretary of Defense Shipbuilding study and ongoing Joint Forcible Entry Operations Study, are examining various force architectures which include notional organic capabilities of DD(X) and the means to sustain DD(X) and other surface combatants to support future forcible entry concepts. Although a final decision on the configuration and size of DD(X) has not been made, it will ultimately be balanced against operational concepts and force structure considerations, including other platforms, necessary to meet the Department's war-fighting requirements.

LITTORAL COMBAT SHIP

12. Senator KENNEDY. Secretary Young, I understand the concept of the LCS, the Navy intends to employ this vessel in contested waters close to shore. By certain accounts, the Navy's acquisition strategy is to rely on contractors to provide ship designs that are to be built to standards established by the American Bureau of Shipping (ABS). As I understand it, ABS publishes standards for commercial vessels, but does not encompass all of the survivability considerations that we normally expect from a Navy combatant. Will these vessels be built to the regular Navy damage control standards?

Secretary YOUNG. LCS will be built to the Navy damage control standards. The February 28, 2003, Preliminary Design Interim Requirements Document specifies that LCS will meet the requirements of OPNAVINST 9070.1, Survivability Policy for Surface Ships of the U.S. Navy.

13. Senator KENNEDY. Admiral Clark, if these ships were not to be built to normal combatant damage control standards, why would you find it acceptable to place these crews at greater risk with less built-in survivability?

Admiral CLARK. As specified in the LCS Flight Zero Preliminary Design Interim Requirements Document, the ship will be built to normal combatant damage control standards in accordance with OPNAVINST 9070.1, Survivability Policy for Surface Ships of the U.S. Navy.

STUDIES INSTEAD OF INVESTMENT

14. Senator KENNEDY. Admiral Clark, I notice that the Navy's shipbuilding plan does not include the 12th and last planned ship of the LPD-17 class. I understand that the Defense Department is conducting a so-called "Forcible Entry Capability Study" that might have some bearing on the make-up of amphibious fleet. I also understand that the Defense Department is conducting an "Undersea Superiority Study" that may change objectives for attack submarine force levels. I note that the rate of submarine construction increases to two boats per year in fiscal year 2007, consistent with plans to meet requirements established in the previous JCS review of submarine requirements. Why does the Navy's budget drop the last LPD-17 out of the shipbuilding plan, perhaps anticipating some different guidance from one

study, when the attack submarine plan does not appear to presume the outcome of the other study process?

Admiral CLARK. The Navy has not changed its requirement for 12 LPD-17 class ships. Relative to the 2003 plan, the fiscal year 2004 President's budget request procures the same number of ships through fiscal year 2007 and continues the 2003 plan by procuring one ship per year in fiscal year 2008 and fiscal year 2009. The 12th and last planned ship of the class can be expected to be procured beyond the current future years defense program. While studies such as the Forcible Entry Study will explore various force structure alternatives including Naval Expeditionary Strike Groups (ESG) and Expeditionary Strike Forces (ESF), and Amphibious and Maritime Pre-positioning Force ships, at this time there is no plan to alter the program of record to acquire 12 ships.

EFFECTS OF PERTURBATIONS IN THE LPD-17 SCHEDULE

15. Senator KENNEDY. Admiral Clark, the shipbuilding profile in the Future Years Defense Program (FYDP) shows a gap in LPD-17 production in fiscal 2005. Has the Navy assessed the effect of this projected gap in production on procurement costs for these ships?

Admiral CLARK. Yes. The Navy and Northrop Grumman Ship Systems estimate of known LPD-17 program cost increases are expected to be approximately \$80-\$100 million due to the impact of the fiscal year 2005 procurement gap. There could be additional risks to the program's cost, schedule, and vendor base depending on how the industry addresses this procurement gap.

16. Senator KENNEDY. Admiral Clark, delays in producing LPD-17 vessels will probably mean that the Navy will have to keep ships with higher operating costs for longer than planned. For example, the 12 LPD-17 ships are supposed to replace a larger number of older ships, and in the process, reduce demands for personnel by roughly two-thirds. How is delaying introduction of the LPD-17 program consistent with the Navy's efforts to get operating and support costs under control?

Admiral CLARK. A number of the ships that the LPD-17 class replaces have already been retired. Keeping the remaining older ships around does increase our operating and support costs. Compared to the President's fiscal year 2003 budget, the President's fiscal year 2004 budget delays the LPD-17 class deliveries by only three ship years. Although undesirable, this delay was necessary in order to balance all Navy programs in the FYDP.

DDG-51 AND LPD-17 SWAP

17. Senator KENNEDY. Admiral Clark, based on the latest information on the agreement to transfer workload for DDG-51 destroyers and LPD-17 amphibious transport docks between Bath Iron Works and Avondale/Ingalls, what effects on total costs of the two programs have you experienced?

Admiral CLARK. The workload transfer was expected to save the Navy funding on the LPD-17 program by consolidating all LPD-17 work at Northrup Grumman Ship Systems, Inc. (Avondale/Ingalls). However, near term DDG-51 costs were expected to increase due to higher labor costs at Bath Iron Works. The net effect was estimated as a \$200 million cost savings to the Navy, plus intangible cost avoidances across both programs. The projected savings are reflected as part of the fiscal year 2004 President's budget request. The work associated with the initial ships (DDG 102 and LPD 19) has been transferred. Actual costs to date on the DDG-51 and LPD-17 programs are supporting the initial swap savings estimates.

ADDING DEMANDS TO UNDERFUNDED SHIPBUILDING PLAN

18. Senator KENNEDY. Admiral Clark, this subcommittee has taken a prominent role in pointing out that the Navy has not been buying a sufficient number of ships to recapitalize the current fleet. The shipbuilding plan in this budget has finally begun to address this situation, but the quantities are increased in the outyears by plans to build nine relatively cheaper LCSs. As I understand your Sea Power 21 vision, the Navy's view is that: (1) LCS would be additive to the 316 ship fleet supported by the Quadrennial Defense Review; and (2) LCSs are not designed to replace any current vessels. Can we afford to start a new class of ships that really does not modernize any current part of the fleet when we are not buying enough ships to recapitalize the current fleet?

Admiral CLARK. Currently, no ships in the fleet can be modernized at any cost to deliver LCS like capabilities. To meet the requirements of the new Defense Strategy, Global Concept of Operations, and future global threats, Navy must invest now in the LCS. A new, focused-mission ship, LCS will provide the fast, affordable, and reconfigurable capability that will sustain access and enhance the Navy's ability to establish sea superiority for our Carrier Strike Groups, Expeditionary Strike Groups, and joint logistics, command and control and pre-positioned ships that must transit the critical littoral threat area to move and support forces ashore. Funding LCS is not at the expense of other equally important plans to recapitalize the current fleet. In addition to 9 LCS, Navy plans to procure 43 ships through fiscal year 2009 including an aircraft carrier, 9 fast attack submarines, 14 multi-mission destroyers, 7 amphibious assault ships including 1 large deck ship replacement, 9 logistics ships, and 3 pre-positioning ships. Additionally, Navy is funding various nuclear refueling overhauls, conversions, and small craft replacement or service life extensions.

19. Senator KENNEDY. Admiral Clark, in that context, I would note that maintaining the current fleet of roughly 300 ships requires that the Navy build 8–10 ships per year over the long-term, while maintaining a fleet of 375 ships would require building roughly 9–12 ships per year. Expanding the fleet to 375 in 10 years would require building roughly 16–18 ships per year. Given the recent shipbuilding procurement experience (5–7 ships per year), it hardly seems likely that the Navy can afford to achieve these production rates without making major reductions elsewhere. These actions could include having to retire existing combatant ships early and substitute the smaller, less capable LCS ships for them. Are there major portions of the current fleet that the Navy will not need under the Navy's new operating concepts?

Admiral CLARK. A fleet of approximately 375 ships is required to fully implement the new Defense Strategy and Global Concept of Operations. This force will consist of a combination of current fleet assets as well as future ship classes. To achieve a fleet of this size and capability requires both near- and long-term commitments. In the near-term, Navy is committed to funding transformational shipbuilding programs. To do so, Navy is decommissioning some older, less capable and more maintenance intensive ships such as *Spruance* (DD-963) class destroyers and *Oliver Hazard Perry* (FFG 7) class frigates and applying those savings to help finance the transition to the numbers, type, and mix of ships required to execute the range of missions anticipated in the 21st century.

20. Senator KENNEDY. Admiral Clark, isn't the addition of the LCS program going to be at the expense of modernizing some part of the existing fleet when the Navy has not been able to allocate sufficient funding to recapitalize the fleet?

Admiral CLARK. The LCS program is not funded at the expense of other essential plans to recapitalize and modernize the current fleet. The Navy's ship recapitalization program and corresponding budget for fiscal year 2004 is "turning the corner" on previous budgets and will continue to increase across the FYDP, ramping to levels needed to recapitalize the fleet to meet current and future warfighting requirements. In addition to 9 LCSs, Navy plans to procure 43 ships through fiscal year 2009. In addition to new ship construction, the Cruiser Conversion, SSGN Conversion, and other funded fleet improvement programs such as nuclear ship refueling overhauls represent parallel efforts to upgrade our current capabilities, while investing in transformational initiatives like LCS, which will provide capability into the future.

21. Senator KENNEDY. Admiral Clark, when would you expect that the Navy would be able to achieve the transformation of the fleet as envisioned in Sea Power 21?

Admiral CLARK. In order for Sea Power 21 to meet the key goals as outlined by the Quadrennial Defense Review and National Security Strategy, and as operationalized by the Navy's Global Concept of Operations, shipbuilding procurement rates must reach a rate of approximately 12 ships per year through the next 20 years to meet the 375 battle force ship requirement.

SEA-BASED MISSILE DEFENSE REQUIREMENTS

22. Senator KENNEDY. Secretary Young, the administration's draft plans for expanded intercontinental-range ballistic missile defense include looking to sea-based defenses. Your prepared statement indicates that the Navy and MDA have signed

an agreement relating to the Navy's contributing ships to cover MDA missions. The Navy seems split over this matter, with some advocating a greater Navy role in missile defenses, other than the Navy theater defense programs, and others who are concerned over the impact this new mission could have on the number of ships available to the fleet for conventional missions. What are the details of the MDA-Navy agreement on contributing ships to cover MDA missions?

Secretary YOUNG. The Navy is in process of assigning U.S.S. *Lake Erie* (CG-70) to the MDA as a dedicated ballistic missile defense testing platform. This action allows the MDA testing program to proceed unabated by the delay and expense that would be involved in modifying an older Aegis-equipped cruiser to accomplish the testing mission, and demonstrates the Navy's firm commitment to missile defense as a core mission. In January 2003, OSD directed that the assignment of *Lake Erie* to the MDA should occur. OSD also directed MDA to procure Standard Missile-3 missiles and Ballistic Missile Defense (BMD) upgrade ship sets to facilitate an early deployment of Navy missile defense capability. A Memorandum of Understanding is currently in staffing which will stipulate the *Lake Erie* cost sharing arrangement, administrative actions and other operational details between Navy and the MDA. We expect the actual ship transfer to occur summer 2003.

Regarding other ships that may be allocated to BMD, the Navy is working closely with MDA and the appropriate combatant commanders to develop an efficient operational concept for Navy participation in the BMD system. This work began last fall and accelerated with the issuance of National Security Presidential Directive 23, which stated the President's intent to deploy ballistic missile defenses in 2004 and 2005. The concept of operations for the Navy's role in the initial defensive operations capability has not been finalized by the U.S. Strategic Command. The details of ship availabilities, impact upon other Navy deployments, and the opportunity costs of this new mission have yet to be fully determined.

23. Senator KENNEDY. Admiral Mullen, what are your views of the effect that using Navy ships for testing intercontinental-range ballistic missile defenses or deploying them for MDA missions would have on the availability of ships for covering existing missions?

Admiral MULLEN. The Navy is supportive of MDA in their efforts to rapidly field effective ballistic missile defenses for the homeland. Effective testing is key to that goal and we are in process of assigning U.S.S. *Lake Erie* (CG70) to MDA as a dedicated ballistic missile defense testing platform. As Admiral Clark testified to the SASC in February, this action allows the MDA testing program to proceed unabated by the delay and expense that would be involved in modifying an older Aegis-equipped cruiser to accomplish the testing mission and demonstrates the Navy's firm commitment to missile defense as a core mission. Although the concept of operations for missile defense has not yet been completed by the U.S. Strategic Command, it's clear that the number of ships involved in the ballistic missile defense mission will have some opportunity cost vis-à-vis existing Navy missions. It's our sense at this early juncture that the multi-mission character of our Aegis ships will enable us to support this new mission assignment without an undue impact on the Navy missions that are currently extant.

24. Senator KENNEDY. Admiral Mullen, in the near-term, how would the Navy propose to meet forward deployment commitments and assume any additional such duties without breaking operational tempo guidelines?

Admiral MULLEN. The Navy uses a process called Global Naval Force Presence Policy (GNFPP) to balance the deployment requirements for our Carrier Strike Groups and Expeditionary Strike Groups. Through the GNFPP process the Navy, in coordination with the Joint Staff and combatant commanders, develops a schedule to meet the forward deployed requirements and keep the deploying units within operational tempo guidelines.

Theater security and deterrence posture is currently under review by the Joint Staff and it is unclear what the requirement will be for the Navy, but we fully expect to maintain rotational presence in the four strategic hubs described by the Defense Strategy. The requirement to provide surface combatants in support of missile defense is an emerging requirement that the Navy is prepared to support. Future schedules developed within the GNFPP process account for additional surface combatant requirements to support missile defense and will continue to be adjusted to support this evolving requirement.

At the same time we plan to preserve a global surge capability to meet critical warfighting and engagement requirements for the combatant commanders. In order to fulfill those commitments, the Navy is rapidly transitioning to a global concept of operations—supported by the fleet response plan—that fundamentally changes

how we will provide combat capability forward. Analysis of potential adversary capabilities allows us to modify the way we provide deterrence—moving from a Carrier Battle Groups (CVBG) centric construct to one where we make more efficient use of our expeditionary forces. By providing broader capability with the same force structure, we will minimize the impact on personnel and operational tempo, while still maintaining the ability to surge sufficient combat power in the event of major conflict. Maintenance and training schedules for returning Carrier and Expeditionary Strike Groups are being adjusted to maximize operational availability, and deployment schedules are being adjusted to provide rotational presence and quality of life.

TOMAHAWK MISSILES

25. Senator KENNEDY. Secretary Young, you and Admiral Mullen referred to the higher costs of refurbishing the remaining Tomahawk missiles that have not already been slated for Block III conversion. One of the issues you raised was that many of these missiles had already been cannibalized for parts to support converting other missiles to the Block III configuration. Presumably, this would not have been the case for missiles with nuclear warheads (TLAM-N) that had been reserved for Strategic Command requirements. Has the Department identified a planned retirement date for the TLAM-N?

Secretary YOUNG. The Navy was directed in 1991 to remove all surface-launched nuclear Tomahawk missiles from active inventory. These surface nuclear Tomahawk missiles were released in 2002 for use in the Remanufacture II program. Submarine torpedo-tube-launched nuclear Tomahawk missiles remain in the active inventory due to strategic requirements. These missiles have not been cannibalized or included in any remanufacture program. During the FYDP, there is no planned retirement date for submarine TLAM-Ns.

26. Senator KENNEDY. Secretary Young, if these TLAM-N missiles were released to the Navy for other uses, how much would converting them to Block III configuration cost?

Secretary YOUNG. If the TLAM-N missiles were released to the Navy for remanufacture, the estimated cost to convert 183 TLAM-N missiles to Block III configuration would be \$312 million, which would include \$1.53 million per missile and a one-time non-recurring cost of \$32.4 million. However, as Tactical Tomahawk (Block IV) missiles began low rate initial production in fiscal year 2002, and will be in full rate production in fiscal year 2004, it would be more cost effective to increase procurement quantities of the more capable Block IV missile than to pay significantly more to convert the older TLAM-N missiles to Block III configuration.

[Whereupon, at 4:53 p.m., the subcommittee adjourned.]

